

Under the patronage of

**His Highness Sheikh Mohammed Bin Rashid Al Maktoum**

Vice President of the United Arab Emirates, Prime Minister and Ruler of Dubai

# 2018 قمة المعرفة Knowledge Summit



Physical and live-stream  
audience

**15,500**



Registrants

**30,000**



A selection of experts and specialists in  
the knowledge industry

**100+**



Media coverage

**649**



Viewership and impressions on media  
and social media

**2,776,849**

#KnowledgeSummit قمة المعرفة

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KNOWLEDGE  
SUMMIT 2018



Fifth Edition



His Highness Sheikh

# Mohammed Bin Rashid Al Maktoum

Vice President of the United Arab Emirates,  
Prime Minister and Ruler of Dubai







His Highness Sheikh

# Hamdan Bin Mohammed Bin Rashid Al Maktoum

Crown Prince of Dubai, Chairman of the Executive Council







His Highness Sheikh

# Ahmed Bin Mohammed Bin Rashid Al Maktoum

President of the Mohammed Bin Rashid Al Maktoum Knowledge Foundation















## Contents



### Day 1 Knowledge Arena



#### Opening Ceremony

- National Anthem.
- Ceremony Presenter.
- Video presentation.
- MBRF Opening Remarks.
- UNDP Opening Remarks.
- Announcing the Global Knowledge Index Results.
- Awarding Ceremony of Mohammed Bin Rashid Al Maktoum Knowledge Award.
- Awarding the winners of the Literacy Challenge.

37



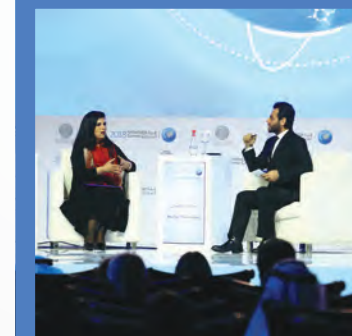
#### Session 1

##### Knowledge economy between past, present and future

#### Topics

- Knowledge Economy: History, Origin, and Components.
- Investing in knowledge as an aspect of economic diversity.
- Achieving international competitiveness by investing in human capital.
- Cementing the Pillars of Knowledge Economy: UAE at the Forefront.

59



#### Session 2

##### The Role of Governments in Empowering the Youth & Knowledge Economy

#### Topics

- Panel Discussion with the guest of honor on Youth Empowerment and Knowledge Economy.

69



### Session 3

#### The Youth: Leaders of Change towards a Knowledge Economy

##### Topics

- The youth and their Role in Building Knowledge.
- Knowledge Economy Trio: the Youth, Entrepreneurship, and Knowledge Empowerment.
- Developing the skills of the youth to meet the challenges of the future job market.
- Empowering today's youth to build tomorrow's economy.

79



### Session 4

#### Awarding achievements in the knowledge sector

##### Topics

- Panel discussion for Laureates of the Mohammed bin Rashid Al Maktoum Knowledge Award (MBRKA).

89



### Session 5

#### Knowledge Capital: A Sustained Wealth

##### Topics

- Knowledge: The Raw Material in the Information Age.
- Optimal Investment: Is it in Infrastructure or in Knowledge Structure?
- Knowledge Capital Development: Engines and ROI.
- The Impact of Knowledge Capital in Attracting Foreign Direct Investment.

107



# Contents



## Day 1 Knowledge Opera



### Session 1

#### The Role of Legislation in Empowering Knowledge Economy

##### Topics

- Enacting Legislation & Regulations conducive to business and economic activities.
- The need for laws that keep pace with rapid changes and meet the renewable aspirations and ambitions of investors.
- How the right legislative environment contributes to building a knowledge economy?

121



### Session 2

#### Giving to Empower Knowledge

##### Topics

- The economics of giving: How philanthropists contribute to moving the wheel of the economy?
- Smart giving: Donate... Educate... Employ.
- Philanthropists: patrons of change towards knowledge economy.
- Knowledge sharing to consolidate efforts of donors.

133



### Session 3

#### Utilizing Knowledge to Improve Healthcare

##### Topics

- HealthCare: knowledge-intensive industry.
- Improving healthcare outcomes through knowledge production and dissemination.
- The role of tech Innovation in reducing healthcare expenses.

145





#### Session 4

### Islamic Economy and its role in Knowledge Economy

#### Topics

- Islamic finance as engine in global economy.
- Halal Industry: A trillion-dollar business.
- Digital Islamic Economy: Is it a knowledge economy?
- Information sharing between Islamic financial markets.
- Islamic knowledge as a pillar of Islamic economy.

161



## Day 1 Know Talks



#### Session 1

### Social Innovation

#### Topics

- Innovation and its historic role in achieving prosperity.
- Why do all countries of the world not have the adequate access to prosperity?
- The vision of HH Sheikh Mohammed bin Rashid Al Maktoum and the UAE for innovation.
- Sheikh Mohammed Bin Rashid Al Maktoum's Initiative for Global Prosperity.

179



#### Session 2

### The Impact of Auto Industry on the UAE's Knowledge Economy

#### Topics

- What is the role of youth in the knowledge economy?
- Does the industrial sector have an impact on economic development?
- Insights into the status of UAE's industrial sector.
- How does the automotive industry play a significant role in supporting the UAE's economic diversification?

185



# Contents



## Session 3

### Digital Darwinism

#### Topics

- What is digital disruption and what does this mean for companies?
- Technology: Why does technology produce a leapfrog effect, how does deployment of technology shift into the re-imagination of business models?
- What can companies do to understand future trends and act upon them?
- When is the right time to rethink technology in your business and what are the best ways to make use of the available solutions?

191



## Session 4

### A New Social System for a Technological Age

#### Topics

- Methodologies for harnessing the potential that science and technology could provide for bringing positive change to our social system.
- An emergent social system based on the latest social innovations.
- How we can engineer technology and cybernetics into a workable and human synergy for the people of all nations?

199



## Session 5

### Redefining Entrepreneurship

#### Topics

- My story: Switching from a «hobby» to a «career».
- Insights of being a young entrepreneur: advantages and disadvantages.
- How governments, organizations and individuals can support young leaders and trailblazers?

205



## Session 6

### Building Cities around a Knowledge Economy

#### Topics

- Creating a City Where People Want to Live.
- Importance of Social Connections.
- Avoiding the Growing Pains.
- Technology, Technology and more Technology.

211



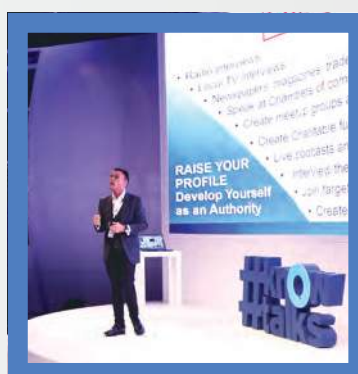
## Session 7

### Moving from Consumers to Producers of Knowledge

#### Topics

- Content is free, production of knowledge is at an all-time high.
- How can schools engage students in meaningful projects that focus on creativity and apply the content students are learning?
- How to move schools, classrooms, and students from consumers to producers of knowledge?

217



## Session 8

### Success in the Knowledge and Digital Age

#### Topics

- Digital Evolution and how it is leading to lucrative opportunities.
- Valuable skills for building a dream team.
- Using influencers and social media to build your business and brand.

223



## Day 1 Knowledge Factory



## Session 1

### Future of Knowledge Model

#### Topics

- Presenting the results of future knowledge model.
- Conceptual framework of the future knowledge model.
- Factors influencing the future of knowledge.
- What is the impact of big data on future knowledge?
- Has the role of traditional indicators ended?
- How can we benefit from the future of knowledge model?

231





# Contents



## Session 2

### The Role of Knowledge Economy in Empowering Entrepreneurship

#### Topics

- The contribution of entrepreneurship sector to the economy of countries and the development of their competitiveness edge.
- The future of entrepreneurship amid the challenges in the Arab region.
- Business incubators and their role in the economic development.
- Entrepreneurship development and sustainability solutions.

245



## Session 3

### Digital Economy and Knowledge Economy: Rivalry or Alliance?

#### Topics

- How did knowledge economy contribute to the emergence of digital economy?
- Digital Economy as one of the pillars of the Knowledge Economy.
- E-Commerce and cross-border data flows.
- Digital Consumption in Knowledge Economy.
- Internet of things: People, Places, Products and Possibilities.

259



## Session 4

### Digital Libraries and the Future of Knowledge Economy

#### Topics

- The role of digital libraries in shaping the future.
- Dubai Digital Library: the future of smart knowledge.
- The impact of digital libraries in knowledge management and knowledge economy.
- The prospects of smart knowledge in the UAE.

272



## Day 2 Knowledge Arena





### Session 1

#### Global Knowledge Index

#### Topics

- Key Findings of the Global Knowledge Index 2018.
- The role of MBRF in Spreading Knowledge.
- The Importance of Partnership between UNDP and MBRF.
- How to Use the Results of the Global Knowledge Index to Build Knowledge Societies?
- Means of Reducing the Knowledge Gap within the Arab Region.

289



### Session 2

#### The Egyptian Model for Education Development

#### Topics

- Developing pre-university education from kindergarten to high school.
- Developing higher education and linking it to the Egyptian and international labor market.

301



### Session 3

#### Knowledge Economy in Future Cities

#### Topics

- Information, Technology & Creativity: Elements of Production in the Knowledge Economy.
- Future Cities and Creative Economy.
- Knowledge Competitiveness between Future Cities.
- Decline of Traditional Services and the Upsurge of Knowledge Services.

315



### Session 4

#### Moving from Consuming Knowledge to Producing it

#### Topics

- The digital citizen in the era of artificial intelligence.
- Future jobs in the knowledge society.
- Skilled immigration and its impact on knowledge economy.
- The economics of artificial intelligence industry and their effect on the global economy.

329



## Contents



### Session 5

#### Entertainment: the New Player in Building Economies

##### Topics

- Employing Knowledge in the Entertainment Industry.
- How Entertainment Plays a Role in Spreading Knowledge?
- Leisure Investment: Bare Necessity or Luxury?
- Entertainomics: How this Industry Contributes to National Income?

341



### Day 2 Knowledge Opera



### Session 1

#### Knowledge Localization for Space Inhabitation

##### Topics

- UAE into space: propelled by young national minds.
- How the space industry contributed to the development of other industries?
- The Importance of Knowledge Sharing in the space industry.
- Global Economic Growth of the Space Sector.
- Knowledge-based economy exchange between Mars and Earth.

361



### Session 2

#### Education: the cornerstone for building a knowledge economy

##### Topics

- The Role of Education in Knowledge Economy.
- Education: a key pillar of productivity and economic competitiveness.
- Preparing the educational system to cope with the needs of the knowledge economy market.
- Virtual education: the alternative option for the young generation.
- Knowledge economy as an academic major.
- The relative importance of vocational and academic education.

357



### Session 3

**Media: How it Influences and Gets Influenced by Knowledge Economy**

#### Topics

- Media in the knowledge economy: The rise of the digital & fall of the printed.
- The end user: from receiving knowledge to creating it.
- Choosing media content in the age of abundance.
- How the young generation contributes to changing the features of the media industry?
- The role of media in creating knowledge content.

391



### Session 4

**FinTech: Where Finance Meets Technology**

#### Topics

- Financial Technology Sector (FinTech): Definition, Challenges and Prospects.
- The impact of the knowledge revolution on the development of financial services.
- Towards cashless financial transactions.
- The importance of developing the infrastructure of the digital payments.

407



## Day 2 Know Talks



### Session 1

**AI & Machine Learning**

#### Topics

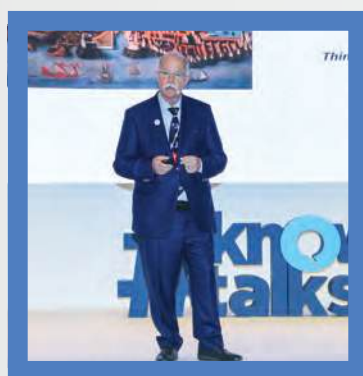
- What is AI? Automation? Deep-Learning? Machine Learning?
- Understanding what AI is not.
- How have AI systems become part of our everyday life?
- Who produces Knowledge in our knowledge economy?

427





## Contents



### Session 2

#### Intangible and Intellectual Capital

##### Topics

- What is IC- Intellectual Capital and Intangibles?
- Leading Nations on IC.

433



### Session 3

#### The way to accelerate innovation

##### Topics

- How to identify weak signals early in business and society?
- How to find in-between spaces for innovation?
- How to initiate rapid prototyping?

439



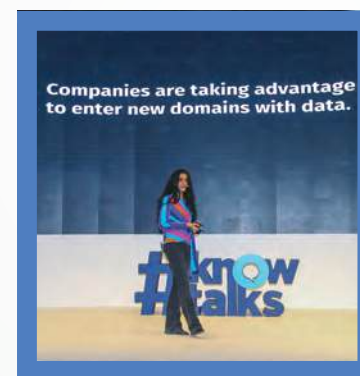
### Session 4

#### Racing Towards Knowledge: Dubai Future Accelerators as a Role Model

##### Topics

- A Vision based on Knowledge and Future foresight.
- Initiative Inception and Strategic Goals.
- Exponential Development and Success Stories.
- Fortifying the Stature of Dubai and the UAE.

445



### Session 5

#### The FinTech Disruption: Using Artificial Intelligence to Reimagine Banking

##### Topics

- The four trends that make financial services vulnerable to disruption.
- Why artificial intelligence is the key underlying technology for FinTech products?
- How existing banks can reinvent themselves to pivot towards FinTech and innovation?

451



### Session 6

## Preparing the Next Generation for the Era of Endless Innovation

### Topics

- How Exponential Technologies will Disrupt How we Learn, Work and Live?
- The impact of Artificial Intelligence, 5G, 3D Printing, Blockchain, Augmented Reality.

457



### Session 7

## Entrepreneurship in the Age of New Space

### Topics

- Scanning the sky: How my curiosity became my career?
- The Journey: From Stargazing to moon-reaching rockets.
- Challenges of operating in the space environment: Design, Testing, Funding, and Operations.

463



### Session 8

## Childlike Imagination – Rocket Fuel for the Knowledge Economy

### Topics

- Engaging the natural creativity of childhood as a primary resource.
- Linking systematic creativity with smart strategy.
- Aligning your organization around the pursuit of creative transformation.
- Maximizing the engagement and intellectual contribution of your workforce.

469



# Contents



## Day 2 Knowledge Factory



### Session 1

#### Efficiency of educational systems and youth effectiveness

##### Topics

- Differences between quantitative and qualitative dimensions in the performance of the educational system.
- The gap between the inputs and outputs of the educational system.
- Current challenges to technical education and vocational training around the world.
- Economic challenges to technical education and vocational training.

477



### Session 2

#### Knowledge Economy Information and Communication Technology

##### Topics

- Structural unemployment is a challenge to Arab economy.
- The Fourth Industrial Revolution as a knowledge-based, technological economy.
- Competitive prospects in the knowledge economy.
- Economic impacts of the digital divide.

489



### Session 3

#### The economic return of higher education, research, development and innovation

##### Topics

- The efficiency of the higher education system.
- The reciprocal relationship between higher education and the labor market.
- Differential performance of research and innovation around the world.
- The effect of research, development, and innovation in the economy of knowledge.

501



## Session 4

### Information and Data: A Cornerstone in Building Knowledge Economy

#### Topics

- What cannot be measured cannot be managed: Data is the Solution.
- Data Science in the Service of Humanity.
- What Can Governments Learn from Open Data Revolution?
- Organizing data protection: Privacy as an opportunity.
- Data as a Commodity: How companies profit from selling your personal data?

Viewership and impressions on media and social media

2,776,849



Interaction and views  
90,019



Interaction and views  
47,420



Interaction and views  
2,632,660



Interaction and views  
6,750



Media coverage  
649



Registrants  
30,000



Physical and live-stream audience  
15,500



# Summit in Numbers



Official website visits

**237,000**



Speakers

**100+**



Sessions

**45**



Days

**2**



No. of Attendees



No. of Speakers



No. of Sessions

1,700 .....

26 .....

10 .....

950 .....

30 .....

8 .....

750 .....

16 .....

16 .....

1,100 .....

27 .....

8 .....



Knowledge Arena  
Hall



Knowledge Opera  
Hall



Know Talks  
Hall



Knowledge Factory  
Hall











Day 1  
Knowledge  
Arena  
Hall













# Day 1

## Knowledge Arena

### Opening Ceremony

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## Speakers

**H.E. Jamal Bin Huwareb**

CEO, MBRF

**Mr. Achim Steiner**

UNDP Administrator

## Ceremony Presenter

**Mr. Neshan Derartinian**

TV Host and Media Personality



**H.E. Jamal Bin Huwaireb**

**CEO, MBRF**

A Dubai Government cultural advisor, H.E. also leads the Mohammed bin Rashid Al Maktoum Knowledge Foundation (MBRF) and heads its advisory board. He is a board member at Dubai Media Incorporated, a national historian, a pioneering man of letters, and in 2016, became Secretary General of The Mohammed bin Rashid Al Maktoum Knowledge Award.



**Mr. Achim Steiner**

**UNDP Administrator**

Achim Steiner is the Vice-Chair of the UN Sustainable Development Group. He was the director of Oxford Martin School and Professorial Fellow of Balliol College, University of Oxford. He was also Director-General of the United Nations Office at Nairobi and Secretary General of the World Commission on Dams.







#### **Ceremony Presenter:**

I call H.E. Jamal Bin Huwaireb, CEO, MBRF to come to the stage to deliver his speech in the Knowledge Summit.



#### **H.E. Jamal Bin Huwaireb, CEO, MBRF:**

Peace be upon you. His Highness Sheikh Hamdan Bin Mohammed Bin Rashid Al Maktoum, Crown Prince of Dubai; His Highness Sheikh Ahmed Bin Mohammed Bin Rashid Al Maktoum, Chairman of the Mohammed Bin Rashid Al Maktoum Knowledge Foundation; Your Highnesses, Excellencies, and honorable guests, Peace be upon you.

I am honored to welcome you all to this remarkable annual knowledge event, which has become a significant global platform to enhance the courses of production and dissemination of knowledge, in addition to being a forum for the exchange of views and ideas among pioneers of decision-makers and specialists

involved in various fields of knowledge. Knowledge is the fortune of nations and the road towards building a sustainable future. Our dear guests, allow me to welcome you into the fifth session of the Knowledge Summit. Today, the Knowledge Summit 2018 is launched bearing the slogan of «Youth and the Future of Knowledge Economy», which is a translation of the wise vision of His Highness Sheikh Mohammed bin Rashid Al Maktoum, UAE Vice President and Prime Minister and Ruler of Dubai. His ideas and thoughts go beyond nationalities, color or race, but rather look optimistically and positively at the future of our vivid Arab region that is full of talents and innovators. Knowledge is the only language that brings together all people and gives them the real power of change, as it is a right to humanity that unifies them wherever they are. Finally, we all are sure that the Knowledge Summit 2018 will deeply contribute to providing a comprehensive view of our regional and global knowledge reality. Furthermore, the Summit will monitor the points of strength and the ways of investment in our race to the future. Moreover, it will determine the points that need to be addressed and develop the initial concepts and innovative solutions that support decision-makers, experts and researchers in preparing sound development plans and policies for knowledge societies.



4 | 2018 Knowledge Summit | المعرفة







In the end, I would like to tell all UAE nationals and all the Arab world that UAE has progressed in the Global Knowledge Index from the twenty-fifth position to the nineteenth position. These are great efforts offered by our wise government and leadership. I would like to thank them for what they have offered. If our passport is globally ranked first, in the near future we will be ranked first in knowledge. Thank You.



#### Mr. Achim Steiner:

Knowledge is the development of the live image and key elements of progress. I am honored to address you today while we are celebrating knowledge for its valuable contribution in the world. The rapid progress in main technologies is the driver of the 4th Industrial Revolution today that changes our economies and societies. Utilizing opportunities offered by such transformation is very important and I am grateful that the focus of this Knowledge Summit is on youth and the future of knowledge economy.

Investment in knowledge economy enhances learning skills, which guarantee that all youth have knowledge

and are able to determine future opportunities. In the UNDP, we are committed to supporting countries and societies when they join this course, certainly, we need partners to do so. Our long partnership with the Mohammed Bin Rashid Al Maktoum Foundation is a bright example of the things that such partnerships can achieve. We have provided strong contributions to knowledge throughout the region through a series of Arab Knowledge reports and the Global Knowledge Index, which tracks knowledge stages in 134 countries worldwide. This year, we will publish the future knowledge report, which searches for potential countries in technological progress, especially in the fields of biotechnology and Blockchain. I hope that we can together continue the development of solutions that will play a significant role in achieving the objectives of sustainable development and the 23rd agenda.

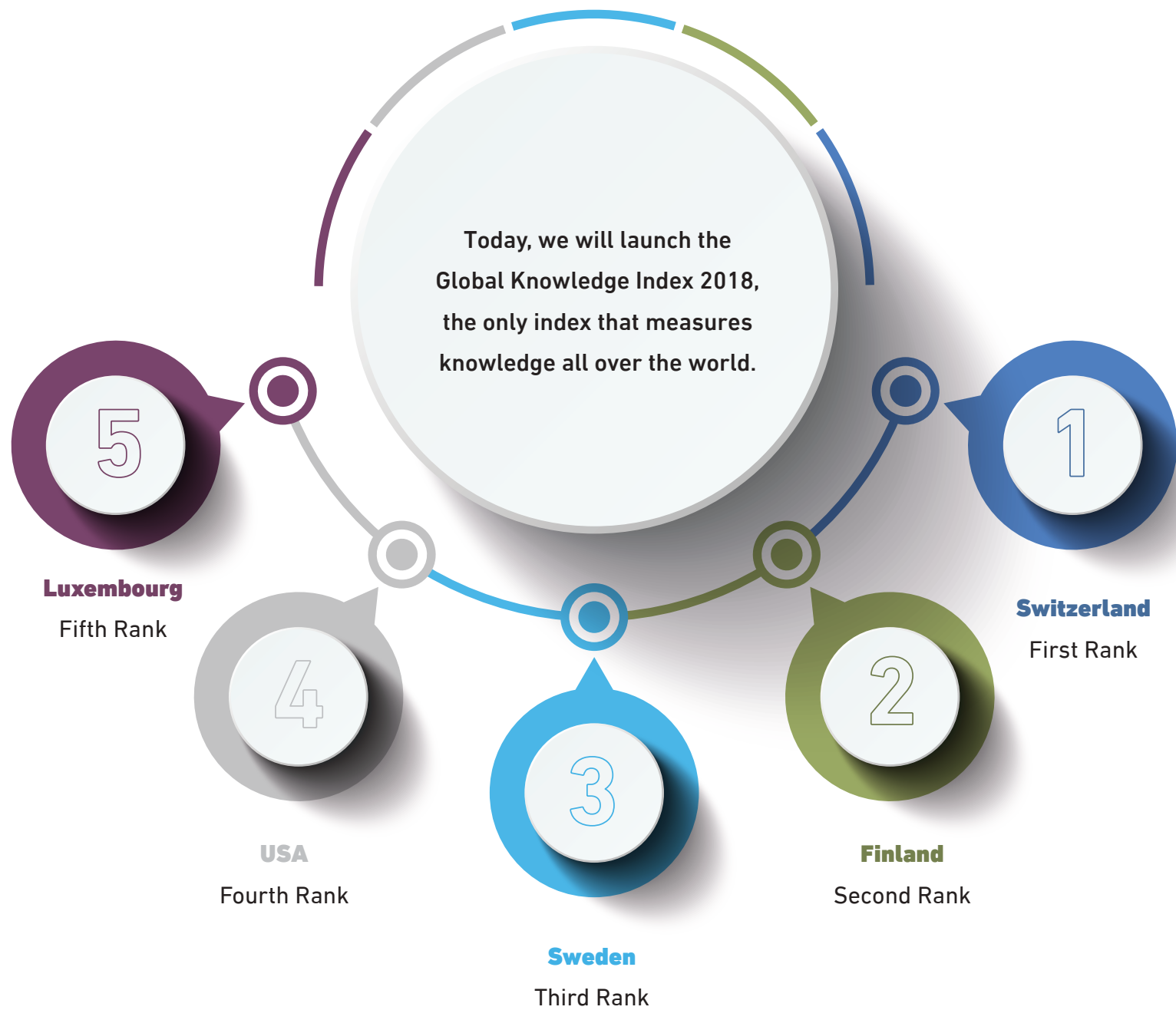
“**Knowledge is the only language that brings together all people and gives them the real power of change, as it is a right to humanity that unifies them wherever they are.**”





مؤسسة محمد بن راشد آل مكتوم للمعرفة  
MOHAMMED BIN RASHID AL MAKTOUM  
KNOWLEDGE FOUNDATION















**Ceremony Presenter:**

May I ask His Highness Sheikh Hamdan Bin Mohammed Bin Rashid Al Maktoum, Crown Prince of Dubai, His Highness Sheikh Ahmed Bin Mohammed Bin Rashid Al Maktoum, Chairman of the Mohammed Bin Rashid Al Maktoum Knowledge Foundation, and H.E Jamal Bin Huwaireb, CEO, MBRF to come to the stage to award the winners.







## Winners of the Mohammed Bin Rashid Al Maktoum Knowledge Award



### **The Institute of International Education**

Mr. Maxmillian Angerholzer  
to receive the award



### **Magdi Yacoub Heart Foundation**

Mr. Moataz Al-Alfi to receive the award



### **The Amersi Foundation**

Mr. Mohamed Amersi to receive the award



### **Saudi Digital Library**

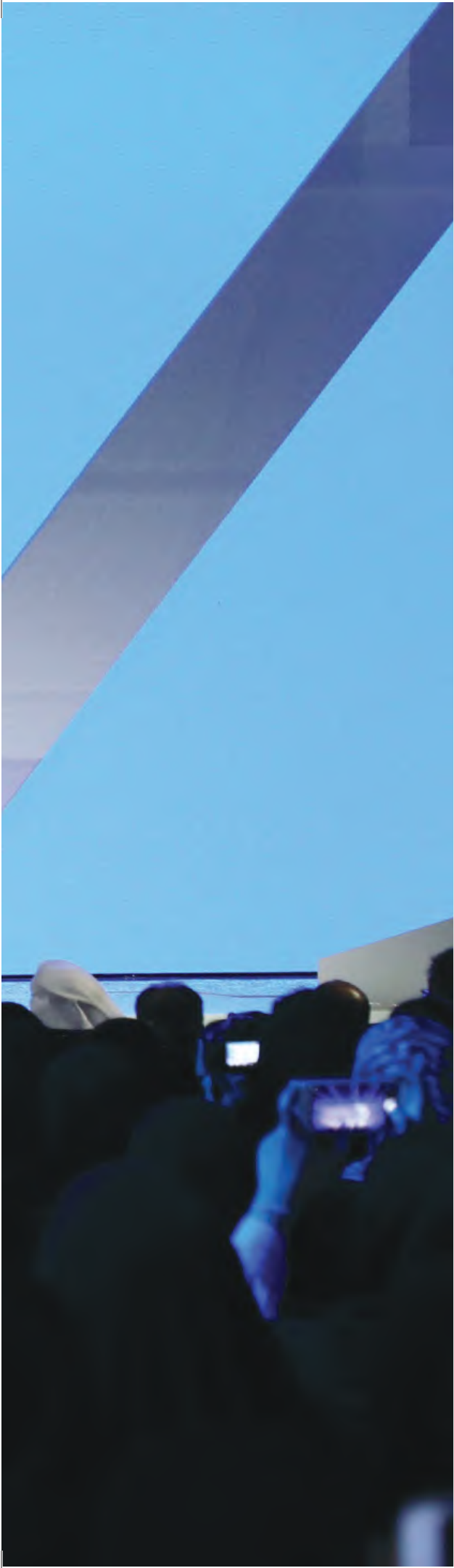
Dr. Saud Al Salahi to receive the award



# قمة المعرفة | Knowledge Summit







جائزة محمد بن راشد آل مكتوم للمعرفة

MOHAMMED BIN RASHID AL MAKTOUM  
KNOWLEDGE AWARD

2030  
LITERACY  
CHALLENGE®

الإمكانيات  
الحدية

## Winners of the Literacy Challenge



### **Governments Category**

The Arab Republic of Egypt - Ministry of  
Education

Prof. Tarek Shawki, Minister of Education &  
Technical Education to receive the award



### International Organizations Category

UNESCO

Dr. Idriss Higazi to receive the award



### Individuals Category

Dr. Al Shefa Ali Hassan - Director of UNESCO

ISESSCO Chair for Woman in Science and  
Technology - University of Sudan for Science  
and Technology







2030  
LITERACY  
CHALLENGE®

الإحصاء  
المصري







Day 1

# Knowledge Arena

## Session 1

### Knowledge economy between past, present and future

#### Topics

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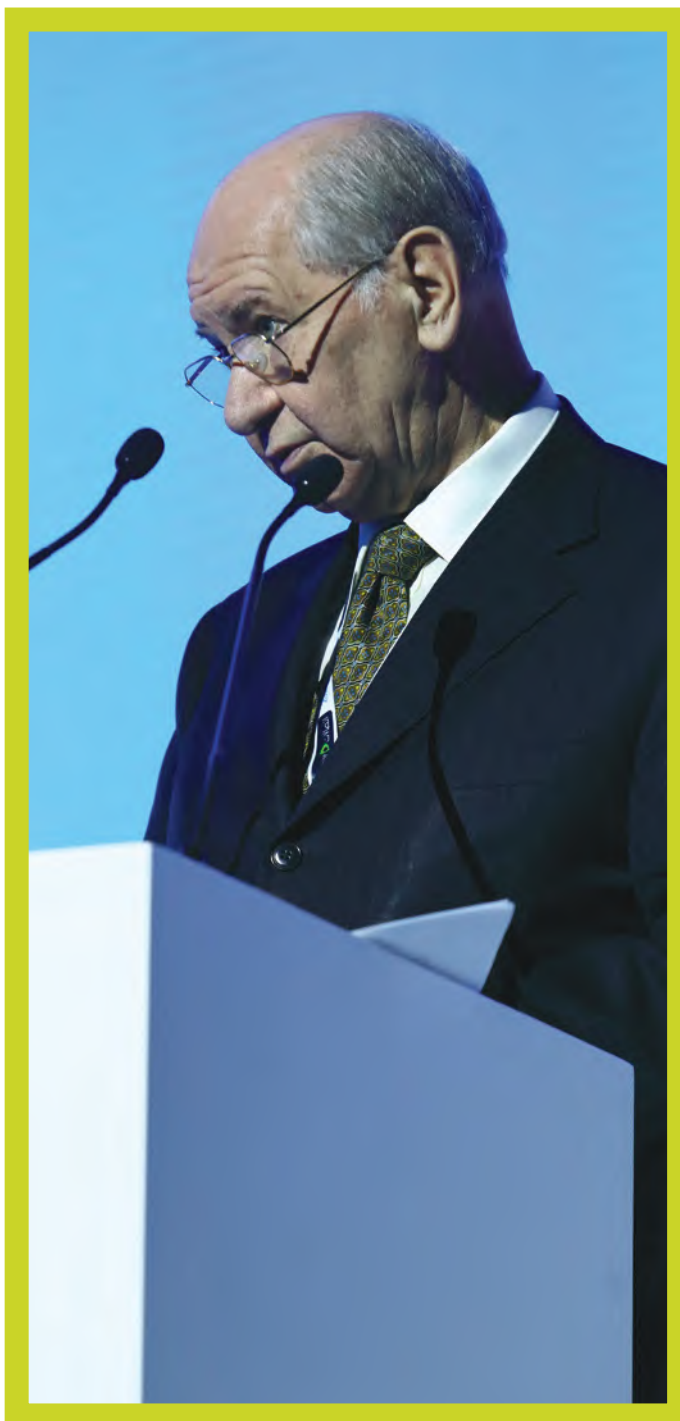


In **Europe**: 20

In **South Korea**  
discussed.

In **Japan** red  
more research





## Speaker

**Prof. Dr. Boris Cizelj**

**President of Knowledge Economy Network**

A senior advisor at the Slovenian Innovation Hub and a holder of MSc in Development Studies at the Institute of Social Studies in Hague, Netherlands and holder of PhD on Regional Integration Processes among Developing Countries. Prof. Dr. Boris Cizelj is the Founder and Director of the Research Centre on Developing Countries, and the Dean of DOBA Business School.











In my speech, I will attempt to answer two questions: First, how did the concept of «Knowledge Economy evolve? Second, how can we address the important issues pertinent to the application of knowledge economy?

In the era of knowledge, there is a major shift toward knowledge. Actually, this is very satisfactory, however it requires more focus and adoption of a more selective approach in what we do and in the way we follow. I will quote the saying of Alvin Toffler, the Futurist, who said: «Knowledge is the most democratic source of power.» The two major factors of our time are: the unprecedented increase in knowledge importance and the accelerating dynamics of change.

For instance, how long a certain product or technology takes to achieve robust conquest of the global marketplace and reach the milestone of 50 million customers? Landline phones took about 50 years to connect 50 million users, whereas mobile phones took 12 years, YouTube reached 50 million viewers in 4 years and Facebook took 3 years. Twitter, on the other hand, hit the 50 million marks in just 2 years. This best demonstrates that the accelerating dynamics of change are faster than imaginable!

The following question arises: what does the concept of knowledge economy really mean? Knowledge

economy simply means an economy that is based on knowledge. Several elements can be underlined to help us fully capture the richness of this concept. It is not confined to economy but it can be fairly said that the concept is an economic, social and, to some extent, political one. In my speech, I shall shed light on ten key criteria that I believe any economy should have to shift to knowledge economy.

The first criterion is the well-developed, smoothly operating market backed with a legislative system that keenly protects the public interests. The second is building a good ecosystem covering all areas of innovation and entrepreneurship. Knowledge economy should therefore focus on developing value-added products and knowledge intensive services. All this should be linked to advanced sciences, research and development (R&D) sectors at both the private and public sectors. Knowledge economy certainly needs good infrastructure to enable the economy to function and operate smoothly. In addition, it requires the realization of political and institutional stability, the establishment of the rule of law, and the promotion of community cohesion. Another key requirement is fostering a culture of recognition, knowledge appreciation, technology, and innovation; and incorporating such culture into the overall country





culture. Moreover, the economy should also be well integrated at the global level because no economy can stand as an island in the open world where we live, even the effectively productive economies.

I am pleased to underline that the Knowledge Economy Network, which I am honored to represent in the Summit, developed a four-pillar knowledge economy model in 2011. The first pillar in the model is education and training because without the high-quality human capital, there will be no knowledge economy. The second pillar is giving more care and attention to science and scientific research because ideas require continuous development and refinement and have to be backed with scientific research. The third pillar is fostering the fields of innovation leading to the introduction of new products and services into the market. The fourth pillar, on the other hand, is encouraging entrepreneurship through the implementation of initiatives launched by both individuals and companies to be accepted and embraced in the market.

Let us have a brief overview on the evolution of knowledge economy over ages. As we all know, the vast majority of people in large communities, states or empires in ancient times, relied heavily on the wisdom and potential of their leaders. Philosophers

had their shares of contributions as well. The majority of common people, however, were mere followers, and only few members of the community were inventive. The first industrial revolution era was mainly driven by the invention of steam engine and the second was driven by the discovery of electricity. All these factors were contributive to diminishing the physical efforts, giving rise to a new trend that lays significant emphasis on the importance of knowledge, human intelligence and ingenuity, and skills. The third industrial revolution, on the other hand, was driven by computers and information society. Many tasks that require less intellectual effort were performed by a manmade machine called «computer», but what we experience today is the Fourth Industrial Revolution, which is driven by artificial intelligence (AI). We have successfully moved one step ahead as many work processes that require some sort of cognitive efforts are being processed by computers. Now, we have robots and smart robots, which some people perceive

“ The two major factors of our time are: the unprecedented increase in knowledge importance and the accelerating dynamics of change. ”



as threats to human jobs, to carry out the tasks that involve repetitions and require less intellectual effort, giving more room to humans for things that need sophisticated feelings, intellect, knowledge, and emotional intelligence, which helps us, of course, with any activity pertaining to dealing with humans.

It is worth highlighting that many of the important fundamentals of knowledge economy are relatively recent like compulsory education, which was applied in developing countries after independence.

As far as world knowledge economy rankings are concerned, South Korea ranks first with 80% graduates between the age of 29 and 34. Canada comes second with 60% graduates, while Russia comes third with 50% graduates. The European Union's target is to reach 40% graduates by 2020. However, most countries are far from such percentage.

Lifelong learning also plays a significant role these days and the same goes for scientific research. However, were we to examine the R&D intensity indicators and total expenditure, we would find that we spent between 1.5 to 3% of GDP on scientific research during the era of the first industrial revolution. There is no doubt that this percentage should be doubled in order to finance the intensive development of knowledge economy. South Korea has come to the fore in this regard by

spending 4.2% of GDP on scientific research, whereas many countries, unfortunately, allocate less than 1% of their GDPs to scientific research. As for innovation, we recognize a significant shift recently. Innovation can be seen as a linear process that begins with basic sciences and ends with introducing new products into the market. Nowadays, all the key players are effectively engaged in the innovation process and provision of new products. Undoubtedly, this proved to be more productive and challenging. At the same time, it requires a more systematic support from the ecosystem.

Entrepreneurship, on the other hand, requires greater support. About 30 to 40% of the working populations are expected to start their own businesses as we move towards the service economy. Service economy support can be provided by individuals or small businesses.

There is no doubt that the community support plays a significant role in this regard. Many countries support this trend, however such support is inadequate. This highlights the small chances our ideas have to be transformed into successful products or services in the market, where the ratio is 3000 to 1. This requires exerting tremendous effort and support for innovators, as very few innovative ideas will evolve







into successful products or services in the market. Briefly, I would like to touch upon the fourth and the last pillar to highlight some of the challenges that need to be duly addressed in order to succeed in building the desired knowledge economy. With regard to education and training, we stand in need of exerting greater efforts to prepare and adapt the education processes, starting with kindergartens, primary and secondary schools, and all the way to the post-secondary and university education. I would like to

focus mainly on the university education. We need to re-train university professors and introduce them to new teaching methods that have evolved into a well-known science in the present-day. The question is no longer confined to what the subjects the students are learning, but rather, the way these subjects are being taught and how students are engaged in the educational process.

The focus in the present-day has shifted from the conventional school curricula, to which we have



grown accustomed, to the acquisition of soft skills. A three-year survey was conducted among a number of employers who were asked: «What are the skills you are looking for in your college-graduate employees? The answers were surprising! About 70% of the surveyed employers contended that they expected their college-graduate employees to possess soft skills including teamwork skills, mental presence, flexibility, creative thinking, critical thinking, adaptability, and all communication skills. It is sad to say that our university curricula lack these skills. In the United States, 57 universities were closed, three have been merged, and another three have been acquired! Public universities were not an exception as 13 public universities were merged. The educational scene in the USA has been altered under the pressure of the market in different parts of the country. A remarkable success story in the USA is that of the University of California, which incorporates several universities run by one administration. The university has showed high success rates as far as innovation and encouraging students to become successful entrepreneurs are concerned. In Europe, we are still far from achieving a similar success. When it comes to universities, we remain conservative. These merger processes significantly increased between 2000 and

2014, rising from one merger a year to 14 mergers in the past year! In South Korea, leading universities are now developing collaborative projects, which will help them attract the best talents and resources to overcome the outstanding challenges.

As far as scientific research is concerned, we can mention noteworthy phenomena, such as: is government funding of scientific research limited or low, while companies' expenditure on scientific research is increasing. The government funding of scientific research should be better regulated and increased as it is directed to meeting the urgent needs and requirements of the business sector.

In conclusion, I would like to highlight a remarkable innovation model. An Indian company developed a breast cancer-screening device priced at \$1. Surprisingly, the device was offered at a price of \$100 in the European and global market! This gives rise to an important question as why we are not developing similar products that can help many people? Therefore, the first principle to be established in this regard is: to succeed in the field of innovation, we need to offer products and services at an affordable price in the market. In fact, this is not only essential for achieving financial success, but also vital to satisfy as many potential customers as possible.







Day 1

## Knowledge Arena

### Session 2

## The Role of Governments in Empowering the Youth & Knowledge Economy

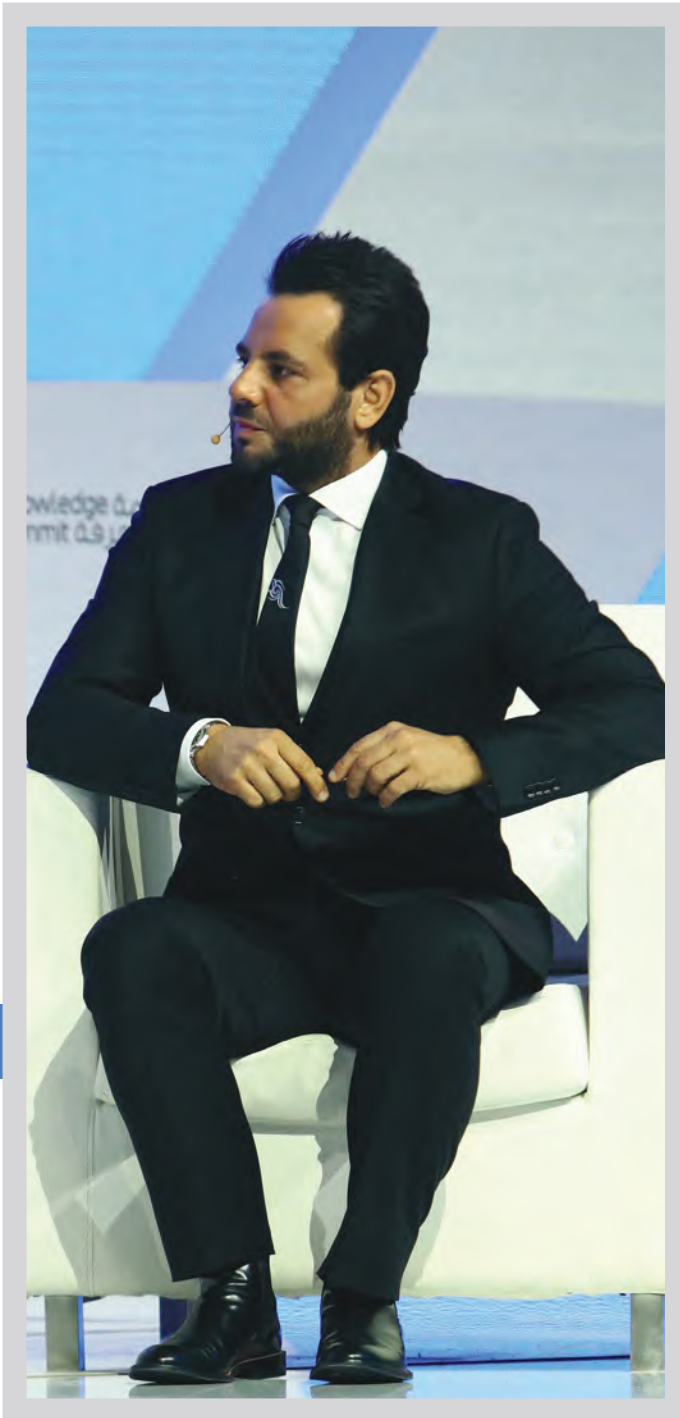
### Topics

- Panel Discussion with the guest of honor on  
Youth Empowerment and Knowledge Economy.









## Speaker

**HRH Princess Sumaya bint El Hassan**  
President of the Royal Scientific Society

## Moderator

**Mr. Neshan Der Haroutiounian**  
TV Host and Media Personality





### HRH Princess Sumaya bint El Hassan

**President of the Royal Scientific Society**

Chair of the Princess Sumaya University for Technology (PSUT), and Vice-Chair of the Jordan Museum. In June 2017, «UNESCO appointed HRH as UNESCO Special Envoy for Science for Peace». Princess Sumaya was the Chair of the World Science Forum 2017. HRH joined the Board of Amman Baccalaureate School in 2005.





**Moderator:**

How do you empower youth in Jordan?



**HRH Princess Sumaya bint El Hassan:**

The secret of success lies in that we invested in minds before focusing on quantity, where our main focus was on quality. We have selected the best high school students regardless of their economic or social background. We were attracting the best young minds, and our main focus was on how we can attract the most able students in this field. Until now, we are the only university in Jordan which have acceptance test and personal interview to accept the new students. We do not accept any student with less than 85% of accumulative degrees in Jordanian High School Exam. We select our student carefully to get outstanding students.



**Moderator:**

Where do we stand in the field of literacy?



**HRH Princess Sumaya bint El Hassan:**

We can say that sometimes we were good at imitating others, instead of innovation, which led to tripping most of the times. The most important thing in combating illiteracy is that we focus on the basics and investment in knowledge. We always say that investment in knowledge has the greatest return, where investment in youth is of great importance.



**Moderator:**

How does investment in youth and minds lead to provide a safe environment for those youth?





**HRH Princess Sumaya bint El Hassan:**

The proper safe environment with which we should deal is the productive environment. The productive and generous person is the most precious thing we have, and we must think about the human resources at all levels. In Jordan, we look at the mass migration as a result of conflicts, and if we overlook this issue for twenty years, we will find that the reason of mass migration is not conflicts but the global challenges such as climate change. We will witness disappearance of ecosystems and entire coastlines. Therefore, we have to think about those secure areas for youth and for the society in general.



**HRH Princess Sumaya bint El Hassan:**

Last year and for the first time in an Arab country, we hosted the World Science Forum in cooperation with UNESCO, under the title of «Science for Peace». This time we addressed the issue of science contribution to the achievement of peace and development. We celebrate the 70th anniversary for the United Nations Declaration of Human Rights, and knowledge is one of the rights available to all humans. One of the recommendations was to ensure that knowledge is an investment in humanity and dignity, and that it plays a role in economic prosperity and represents a locomotive that will help young generation in the future.



**Moderator:**

What are the recommendations of Science for Peace Conference that was recently held in Paris?



**Moderator:**

Is there any sustainable strategy to achieve cooperation between Arab governments and to implement all plans in this regard?









#### HRH Princess Sumaya bint El Hassan:

I think such summit is the best example for how to achieve cooperation among all parties. The question that arises is how can we reap the fruit of this cooperation? For example, we at the Royal Scientific Society are proud to have partnerships with Arab parties, but the problem is that we sometimes look forward to partnerships with the Western world instead of the Arab world.



#### HRH Princess Sumaya bint El Hassan:

I think our problem lies in our concentration on dealing with the West without looking at what we achieve. For example, 74% of the cutting-edge scientific researches in America was carried out by non-Americans. Science must be based on merit not favoritism. Therefore, the more we become serious in fighting favoritism, the more we are able to overcome it easily. For example, we have an agreement with the University of Central Florida, where students join it in the third academic year, then come back after gaining international experience and skills because they know very well that they will return to help their homelands benefit from what they have learned.

When we adopt a network that consists of 22,000 young scientists, we give them hope by telling them that failure is not the end of the world. We have to change the way we think, for it may take a whole generation to achieve that.

I think we are harsh on ourselves in this regard, as we have achieved a lot in that direction. Every day we have success stories of Arab young scientists who excelled in different fields and achieved great successes.



#### Moderator

What do we need to export knowledge?

**I think our problem lies in  
our concentration on dealing  
with the West without  
looking at what we achieve**





**Moderator:**

How should the relationship between governments and traditional media or social media be today to create this strong link and strong background of youth as a starting point?



**HRH Princess Sumaya bint El Hassan:**

We are facing a huge problem. Where is the Arabic content on social media platforms? How can we use social media as a driver for change? When looking at the drivers for change in the world, we will find water, energy, climate change, waste, poverty, population studies and organizations.

Add to these, the need to consider technology and its diversity, and how this will affect our way in life. If we start to look at social media networks as a component of technological development, we will begin to deal with the fact that social media is a driver that can be used to enhance productivity when used

wisely. Unfortunately, in the absence of government legislation regarding the way in which we use social media as a productive medium, here lies the danger of backwardness.



**Moderator:**

How can talented youth guarantee the government support?



**HRH Princess Sumaya bint El Hassan:**

The most important thing is trust, and in the absence of restoring trust between the government and the youth, we will not move forward an inch. The first thing we must do is to go back to the foundations, where we have to invest in trust.

If we start talking about building appropriate trust between government agencies and end-user, i.e., the youth, the entire society will pass several stages to



reach the sound governance. Then we cannot identify the function of the government or academics, as we need to build an independent governance model that is interconnected with the public sector, private sector, civil society and universities, as we need to work together. One of Paris forum recommendations was to establish an Arab charter for ethics.



**Moderator:**

What are the main concerns of the Arab youth?



**HRH Princess Sumaya bint El Hassan:**

Youth want to find a suitable job to earn a living, they do not want to rely on their parents to achieve this, and they have the enthusiasm and energy to achieve this.

People want to feel they are able to build their future, and determine the way in which they live according to their own standards.



**Moderator:**

How can governments take care of young creative talents?



**HRH Princess Sumaya bint El Hassan:**

We always talk about the innovative ecosystem, for that we must provide encouraging work environment, where the components of innovative ecosystem need to diversity, and the speed which we deal with those components must be specially designed for those circumstances. We must look at the foundations and the essence of things to deal with the issue of creative talent. We must also think about the issue of comparing between public education and private education graduates, it is a problem that must be solved, in the same time we must adhere to our Arab values, and have contemporary thinking.





# Day 1 Knowledge Arena

## Session 3

### The Youth: Leaders of Change towards a Knowledge Economy

#### Topics

- The youth and their Role in Building Knowledge.
- Knowledge Economy Trio: the Youth, Entrepreneurship, and Knowledge Empowerment.
- Developing the skills of the youth to meet the challenges of the future job market.
- Empowering today's youth to build tomorrow's economy.

2018 Knowledge Summit

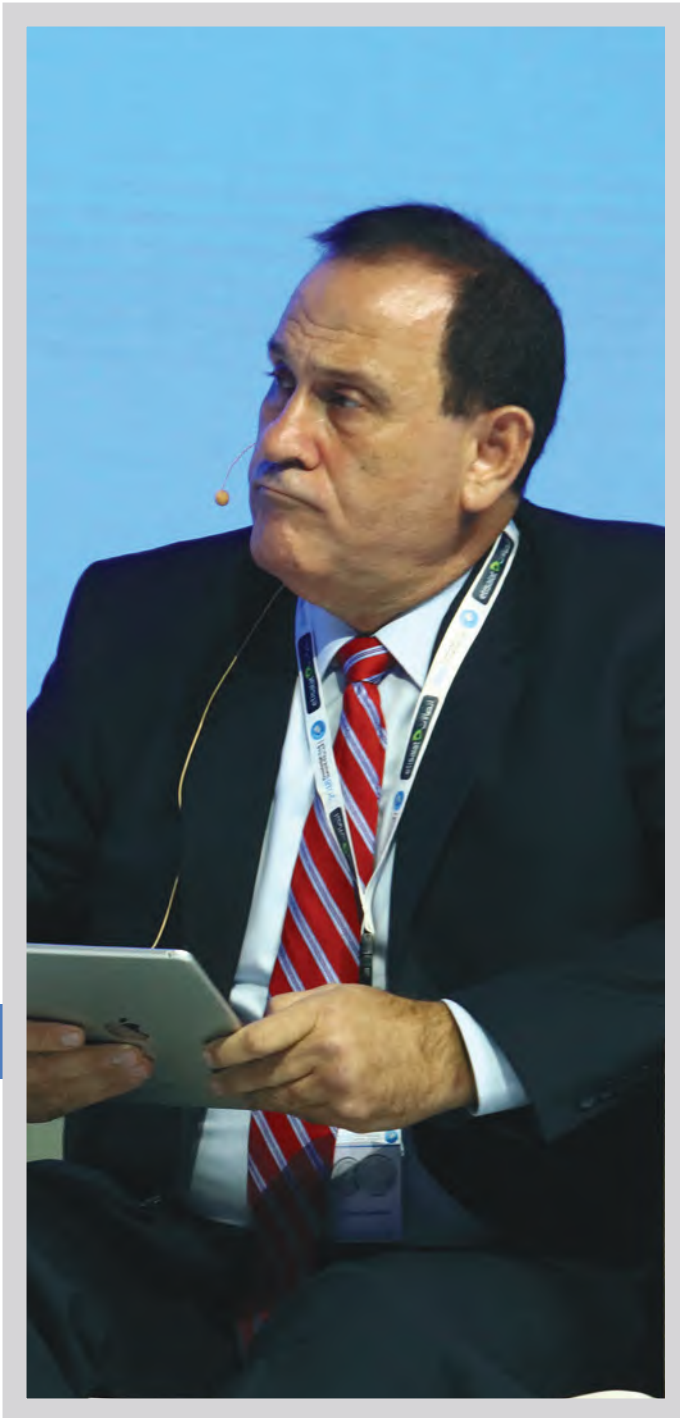




# قمة المعرفة Knowledge Summit







## Speakers

**HRH Princess Sumaya Bint El Hassan**

President of the Royal Scientific Society

**H.E. Dr. Mohammed Abu Rumman**

Minister of Culture and Minister of Youth - Hashemite  
Kingdom of Jordan

**H.E. Syed Saddiq Syed Abdul Rahman**

Minister of Youth and Sports, Malaysia

## Moderator

**Dr. Imad Hoballah**

Provost and Chief Academic Officer - AUD



**HRH Princess Sumaya Bint El Hassan**

**President of the Royal Scientific Society**

Chair of the Princess Sumaya University for Technology (PSUT), and Vice-Chair of the Jordan Museum. In June 2017, «UNESCO appointed HRH as UNESCO Special Envoy for Science for Peace». Princess Sumaya was the Chair of the World Science Forum 2017. HRH joined the Board of Amman Bacculaureate School in 2005.



**H.E. Dr. Mohammed Abu Rumman**

**Minister of Culture and Minister of Youth, Hashemite Kingdom of Jordan**

He received his BA in Political Science from Yarmouk University in Jordan in 1995, MA in Political Science from Al Al-Bayt University in Jordan, and then he received his PhD in Political Science from Cairo University in Egypt. Moreover, he is the Director of political studies units at the Center for Strategic Studies at the University of Jordan.



**H.E. Syed Saddiq Syed Abdul Rahman**

**Minister of Youth and Sports, Malaysia**

He is a law graduate from International Islamic University Malaysia (IIUM). He is the co-founder and currently the Youth Chief of BERSATU. He was also appointed as the Special Officer in the Prime Minister's office. He received an Academic Fellow at Temple University, Dialogue Institute.





**Moderator:**

What are the efforts exerted to reduce youth's unemployment rates? What are the newly innovative jobs that will benefit everyone in Malaysia and worldwide?



**H.E. Syed Saddiq Syed Abdul Rahman:**

We are currently keen to take proactive actions to ensure that Malaysian youth can have technical, vocational education and training (TVET) since we believe these skills are required for the future. At the same time, however, we believe that TVET is a double-edged sword. On one hand, employment rates among technical and vocational education graduates are 94%, which are far higher than the rates of university graduates and even higher than the rates of Masters holders. On the other hand, the Fourth Industrial Revolution and the age of digital economy and AI can change the entire technical and professional skills in a blink of an eye. Therefore, it is important for differ-

ent industries to keep up with the changes and adapt thereto.

We should give TVET our attention. It is also important not to pre-judge young people as being inexperienced and incapable. However, we should look at the knowledge they obtained, their contributions and their ability to innovate and create to ensure building an economy fit for the future..



**Moderator:**

What are the efforts exerted by the Ministry of Youth and Sports of Malaysia to promote the State's agenda for youth empowerment? What are the responsibilities of youth and leaders in shaping the future of economy?



**H.E. Syed Saddiq Syed Abdul Rahman:**

It is important to open doors and provide good opportunities for the youth. We must ensure that the State's



entire governance structure and the institutional sector are open up for young people. In addition, we should be keen to implement the State's Youth Empowerment agenda on the ground.

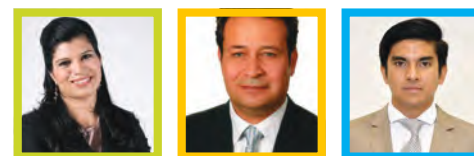
Young people are mostly capable of innovation and creation. The Malaysian Ministry of Youth and Sports' role focuses on the implementation of the Youth Empowerment agenda. Youth shall be involved in all phases and levels of decision-making process, in the government and the institutional sector as well to ensure the maximization of young people's role, not only because they are the future, but also in recognition of their present leadership role.



#### Moderator:

What are the steps that should be taken to overcome unemployment? What are the required steps to prepare and qualify young talents and competencies for future jobs? What are the activities, responsibilities and policies that should be adopted in this regard?

**Youth shall be involved  
in all phases and levels of  
decision-making process.**



#### H.E. Dr. Mohammed Abu Rumman:

Indeed, young people face the challenges, but they also represent a great opportunity for growth and positive change. Young people are the driving force to the change we are looking for.

The Jordanian youth have greatly preceded the government and officials. Therefore, governmental officials are required to keep up with them, not to lead them because building communication bridges with those youth is required. The Jordanian youth launched initiatives in which thousands of young people participated, and some of them have made great achievements and won scientific prizes. I think that governments should give a space of freedom for the youth to establish themselves before empowering them and provide them with an appropriate secure environment to release their competencies and potentials; I believe this is the main responsibility of Arab governments.

In Jordan, we have recognized the importance of focusing on young generation; therefore, the Ministry of Youth returned to its first name after it had been





the Supreme Council for Youth. Currently, we are discussing the academic curriculum changing process in order to keep up with the new developments and transformations. We are trying to get rid of old teaching theories prevalent in the educational institutions, as we are currently engaged in a complete restructuring process for academic curricula. We are also discussing several new concepts in the Curriculum Development Higher Council.

At the level of the Ministry of Youth, we pay a special attention to entrepreneurship in schools and universities and at the level of university graduates who are waiting for employment. Unemployment's unprec-

edented rates among young Arabs and Jordanians have raised the alarm and drawn officials' attention to this serious problem. This is prompting them to focus their attention on finding solutions. As a result, our view to the youth has changed, and we started to develop real policies for this generation. The Jordanian government focuses on entrepreneurships, as the private sector and civil society play a major role in serving the community. In my opinion, if we want to depict the expected image for youth in the future, let's say in the next five years, I will not be exaggerating if I say that I am very optimistic. I believe that the Arab youth generation will not be losers, as some people

expect, but they will lead and participate actively in the next phase. Fairly speaking, I have also noted that there is a considerable emphasis on some economic and educational aspects, not to mention the political aspects as well.

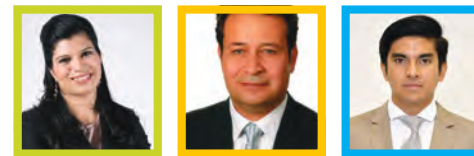
Youth must be empowered at the political level, where they should be engaged in the decision-making process.

The matter should not be limited to allocating positions for young people in governments, but rather qualifying and training young generation politically, culturally and scientifically to be ready to take the responsibility of the next phase. In Jordan, there is a focus on the political, professional and scientific empowerment of young people. There are many plans, and real-serious thinking to achieve a qualitative shift in official policies towards youth.



#### **Moderator:**

What are your suggestions for governments and the concerned parties to review and play an active role in changing the culture about young people?



#### **H.E. Dr. Mohammed Abu Rumman:**

The great challenge is to change the culture as well as youth's psychology. Therefore, we are focusing on this aspect at the present and future stages.

Most of our speeches to young people are now focusing on the fact that those who wait for the governmental job will wait for a long time. Instead, young people should rely on themselves and think about establishing their private enterprises and developing their abilities and skills. Indeed, it is a real strive, but the changes we are witnessing in the young generation are beyond expectations.

We are witnessing the rapid changes into the better. A large number of young Jordanians work in the private sector. Young people establish their private enterprises and achieve rapid leaps. Knowledge Economy has recently grown exponentially in the e-business, e-markets and corporate sectors.







**Moderator:**

To what extent will the phenomenon of brain drain and talent migration affect the future of the region's development process? How can young people be empowered and encouraged to meet the challenges posed by the current situation in academia and societies for the change lead?



**HRH Princess Sumaya bint El Hassan:**

I think we are living in an age when we must realize that this generation of young people is the «Evolution Generation». Before we start thinking about changing the way young people think, we should think about the basics. First, we must think about the infrastructure

and the environment. We should also think about policy makers' mentality and their way of thinking. I think it is important when talking about the young generation to be well aware that we live in the age of artificial intelligence and the Fourth Industrial Revolution, and that this world is depending on data. Now, data is gaining much importance and has become the key component for ensuring the provision of the appropriate evidence-based solutions.

From the perspective of young people, everyone has the right to form his own opinions and views, but these opinions should be based on facts. I think we are deficient in this aspect, as we rely on the logic of reaction rather than proactivity and entrepreneurial sense.

I fully believe in the importance of giving chances to individuals to achieve excellence, uniqueness and prosperity, but we need to define a framework, as we need to develop codes for societal behavior and ethics because we know that, unfortunately, without defining these basics and without developing codes



for societal behavior and ethics, it will cause a chaos. This time is exciting and challenging for young people, and I believe that the needed tools to empower young people are available and ready, and we just need to ensure that these mechanisms are properly activated. Such important forums helped our region to guide development and transformation. Certainly, the journey is still at the beginning; however, the arrangements we are preparing for today will help us to determine our final destination. If we respond to the global transformation process that is creatively defined by knowledge, we will achieve growth and prosperity through the maximization and unleashing of our common creative abilities.

We all aspire to participate in achieving the greatest possible Arab Knowledge revolutions. We seek to nurture innovation and creativity by engaging young talents and competencies, and in the midst of that we realize the dimensions of the historic journey of our peoples from Renaissance to Enlightenment.

Our renaissance has become within our reach, and it requires the empowerment of young people. Youth is the future of our region, and our world's major and greatest hope. The future belongs to young people; i.e. it is really Knowledge Economy that will inevitably shape the features of our future for

successive years.

Youth all over our region and worldwide represent the best potential of mankind. They are capable of using minds, investigating, scrutinizing, analyzing and imagining. Youth are our Arab Nation's creative future, and their passion for science and knowledge is a gift for all of us. Our region and our world are in dire need to overcome the gap of the renewable and hopeful knowledge.

In the Arab region, we can accurately reflect the growing global challenges that require us to develop knowledge-based solutions. The pivotal and essential question in this regard, which we must answer today, is how can we ensure our developing countries' success in sharpening and developing our research, creative and innovative potentials, and participating in formulating feasible creative solutions to solve the local challenges, which will undoubtedly reach the whole world? Therefore, we cannot take the first step without creating, sponsoring and instilling a supportive culture for creativity and innovation, where the outputs of creation and scientific innovation can flourish. Thus, Knowledge-based Economy flourishes and grows successively. Young people must be well aware that they enjoy our love, care and support in all they try to accomplish.





Day 1

Knowledge Arena

Session 4

# Awarding achievements in the knowledge sector

## Topics

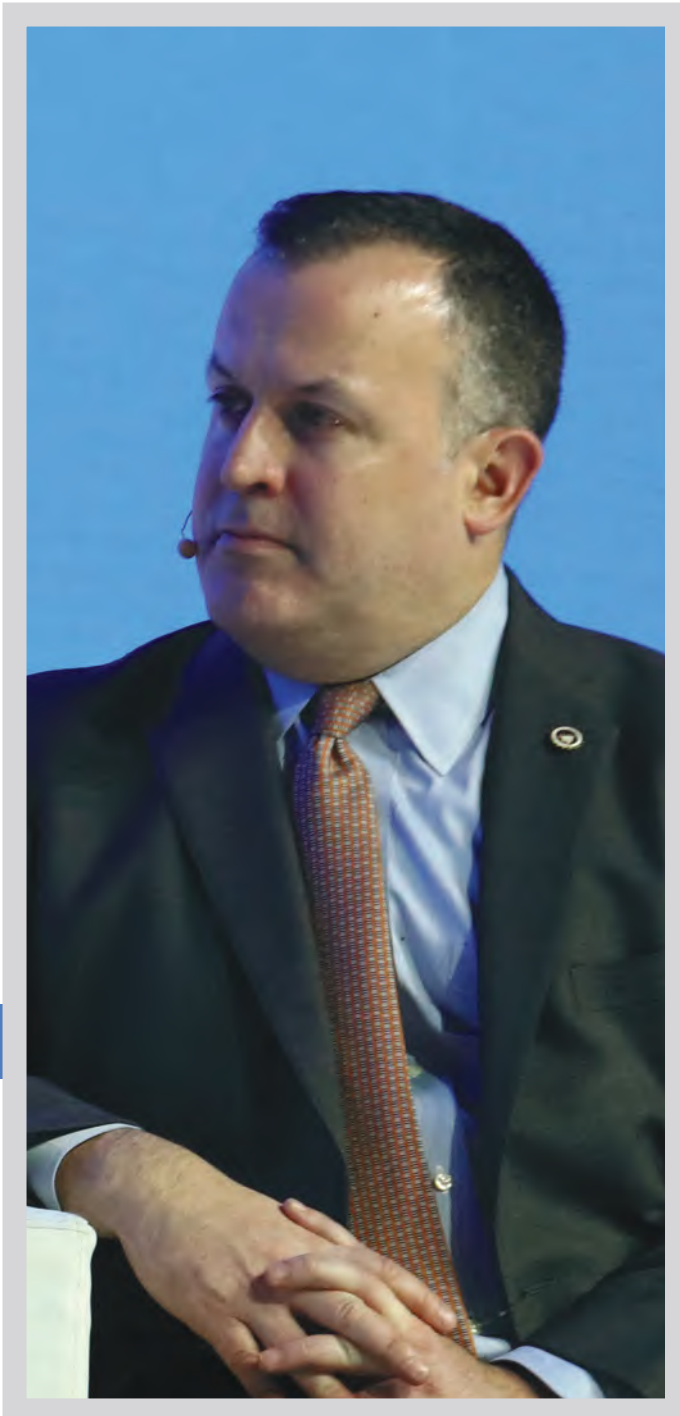
- Panel discussion for Laureates of the Mohammed bin Rashid Al Maktoum Knowledge Award (MBRKA).

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## Speakers

**Professor Sir Magdi Yacoub, FRS, OM**

Professor of Cardiothoracic Surgery at the National Heart and Lung Institute, Imperial College London

**Mr. Maxmillian Angerholzer III**

Executive Vice President of the Institute of International Education (IIE)

**Dr. Saud Al Salahi**

Director General of Saudi Digital Library (SDL)

## Moderator

**Mr. David Bennett**

Member of the Advisory Committee of MBRKA



**Professor Sir Magdi Yacoub**

**Professor of Cardiothoracic Surgery at the National Heart and Lung Institute, Imperial College London**

Professor of Cardiothoracic Surgery at the National Heart and Lung Institute, Imperial College London. Founder and Director of Researches at the Magdi Yacoub Institute at Harefield Heart Science Centre. Besides, he is the Founder and Director of the Magdi Yacoub Heart Foundation.



**Mr. Maxmillian Angerholzer III**

**Executive Vice President of the Institute of International Education (IIE)**

He served as Member of the Board of Trustees of IIE. He is also a member of the Economic Club of Washington, D.C., and serves as Chair of Programs Committee at Washington National Cathedral. He previously served as President & CEO of the Center for the Study of Presidency & Congress (CSPC). He was also a managing director of the Richard Lounsbery Foundation.



**Dr. Saud Al Salahi**

**Director General of Saudi Digital Library (SDL)**

Advisor to the Vice Minister of Education, Secretary General of Translation Unit, Ministry of Education. He has a PhD in Curricula and Teaching Methods, Higher Diploma in Management and Economy, Exeter University. He has a Master in Educational Administration from Umm Al-Qura University.



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**Moderator:**

You are welcome & thank you for your attendance! Some of the winning institutions of the Mohammed Bin Rashid Al Maktoum Knowledge Award (MBRKA) this year may be known. Therefore, we can start our session with a short introduction from speakers about their institutions. Let's start with Dr. Saud Al Salahi.



**Dr. Saud Al Salahi:**

The Saudi Digital Library (SDL), established in 2005, is honored to provide all digital research resources for all Saudi universities to enhance feasibility of Saudi scientific research and increase research productivity.



**Moderator:**

How do you describe the Saudi universities condition before founding of the Saudi Digital Library?



**Dr. Saud Al Salahi:**

In the past, each university had to provide the required resources on its own, which has resulted in a disparity in the available sources of Saudi universities.



**Moderator:**

How does the Institute of International Education come with the idea of providing knowledge to societies?



**Mr. Maxmillian Angerholzer III:**

Institute of International Education was established 100 years ago. The purpose of its establishment at that time was the establishment of a global organization and building an international community to



promote knowledge and education. We have come to know the Mohammed Bin Rashid Al Maktoum Foundation through our efforts in the dissemination of knowledge. The Institute is one of the major international organizations in student exchange and also has administrated «Fulbright» Scholarship Program for 70 years.



#### **Moderator:**

How can you maintain relationship networks, which students have built during their study abroad?



#### **Mr. Maxmillian Angerholzer III:**

This largely depends on the shared experience gained by students during this experience, regardless of whether they have the opportunity to meet personally in the future or continue their relationship on the Internet.





**Moderator:**

Can you spotlight your foundation efforts in Egypt?



**Professor Sir Magdi Yacoub:**

Magdi Yacoub Foundation is concerned with the production of new knowledge on heart diseases, mainly in Africa and the region by training young doctors and scientists to undertake researches on heart diseases. The Foundation also conducts researches on genetic heart diseases by researchers from Egypt and the region to learn more about genetic diseases that affect the heart muscle. The Foundation also publishes an open source scientific journal to follow-up everything new in sciences and global medical practices related to cardiology.



**Moderator:**

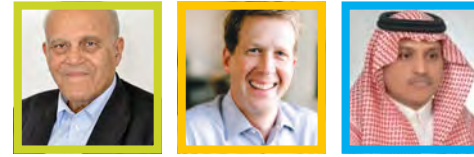
How do you provide necessary funding for new generation of researchers to study diseases that spread among the region's population instead of funding their travel to the West to study and conduct research?



**Professor Sir Magdi Yacoub:**

We are proud that our Egyptians young doctors and specialists conduct highly complex heart surgeries. Many Egyptian young scientists in our foundation obtained their PhDs from Imperial College in London and Stanford. Our foundation, in collaboration with Al Alfi Foundation, also provides the needed funding for many of them to obtain their scientific degrees. Their researches take place in Aswan to produce knowledge. The researchers arrange genome sequencing in laboratory by themselves, and the key lies in reliance on powerful bioinformatics applications to analyze the genome in equipped laboratories due to the huge number of genetic variations.





**Moderator:**

What are the other efforts has your Library observed for Saudi researchers, who devoted their researches to solve local problems?



**Dr. Saud Al Salahi:**

Before establishing the Saudi Digital Library, students faced difficulty in accessing research resources in libraries within the KSA or even in Arab countries. Some researchers were forced to travel to Egypt and other countries to obtain knowledge. Now, Saudi researchers can access knowledge resources with one click. The library has established a vivid community to share knowledge, and we are proud of the Library's ability to provide more than 200 million digital sources.



**Moderator:**

What is the use of knowledge produced and shared through this form of ideas exchange?



**Mr. Maxmillian Angerholzer III:**

The exchange of ideas and experience is important, but the outcome of this collaboration and what participants learn and achieve together during the exchange process is more important. From an American perspective, I think we are keen to maximize the mutual benefit in the student exchange and academic scholarship programs.



**Moderator:**

What is the importance of building these personal relationships and exchanging of ideas in the scientific field?











#### Professor Sir Magdi Yacoub:

Young trainees, who come from different countries, learn many things from traveling to Aswan and attending our scientific discussions to know much about diseases they have never heard of. They learn much about people's lives in low-income communities, which contributes to generating new surgeries.



#### Mr. Maxmillian Angerholzer III:

I want to stress that the solution lies in enhancing knowledge dissemination, economy growth and building societies. These concepts are universal for all people, as all people are striving to achieve them. These joint endeavors in the fields of health and medicine bring people together. It is amazing when students from around the world work together in a project, they immediately overcome all these barriers and differences and start to build these wonderful re-





lationships with one another, which transcend diplomatic challenges.



**Moderator:**

What are your expectations for the growth and prosperity of knowledge to meet the medical needs of peoples in the Arab world?



**Professor Sir Magdi Yacoub:**

Several studies showed the need for mutual exchange of knowledge between all concerned parties to achieve prosperity. The institution always looks to serving the patient and humanity in general. The 'Benefit to all concerned parties and society' model presented by two students from M.I.T has finally won the Nobel Prize. Everyone has to benefit therefrom, but at the same time, we should not lose sight of the goal that brought us together here, namely, the service of society and humanity. In case of our institution, we add the task of alleviating the suffering of the sick.



**Moderator:**

Why does the university education system lie at the center of KSA's economic development plan?



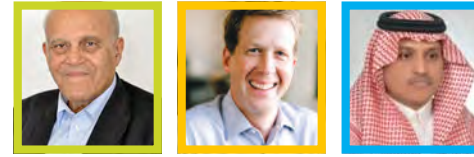
**Dr. Saud Al Salahi:**

Knowledge is a borderless global value, and universities are the centers of knowledge and researches. The Saudi Digital Library provides the necessary knowledge resources for Saudi academics. This does not necessarily mean that the acquisition of knowledge is limited to college students only.



**Moderator:**

What is your advice for decision makers to achieve a balance between investment in scientific researches, knowledge dissemination and participation in alleviating the suffering of the sick?



#### Professor Sir Magdi Yacoub:

We are facing a major challenge to improve the quality of medical services provided to patients, as well as to invest in the production of knowledge for the new generation.

We have reached an agreement with decision-makers to allocate 70% of our efforts to conduct applied researches and 30% for blue-sky researches to produce knowledge for knowledge.



#### Moderator:

It is hard to choose, taking into account the vitality of youth, and the need of a large number of youth to get a job.

**Knowledge is a borderless  
“ global value, and universities  
are the centers of knowledge  
and researches. ”**



#### Professor Sir Magdi Yacoub:

Encouraging intellectual freedom is important to achieve a great scientific leap. This will benefit the whole country, then industries and communities would celebrate the great accomplishment achieved by these researches, even though they did not support them when scientists and researchers proposed their ideas.



#### Moderator:

How do you see this change and the profound transformation happening to the personalities and visions of students and academics after the experiment of knowledge exchange in their work?





**Mr. Maxmillian Angerholzer III:**

Students and academics go back to their home countries and their academic institutions after the experiment of knowledge exchange, having knowledge and experience that they would not have obtained without going through the midst of this experience. The cardiologist who participated in the experiment of knowledge exchange with Magdi Yacoub Foundation in Cairo, perhaps would learn different treatment ways when examining patients who suffer from diseases he had never encountered before. They would carry this experience and what they learnt to their home countries and share it with their university colleagues.



**Professor Sir Magdi Yacoub:**

I would like to emphasize the point of Mr. Maxmillian, but we should not ignore the importance of human interactions and their benefit to people. Many of Aswan Heart Center visitors can see the impact of interactions

with colleagues at the center and with the community members and patients. They talk about human enrichment, which they feel in their personalities as a result of their interactions with patients who have lost hope for treatment, as well as scientific and cognitive enrichment.



**Moderator:**

Does the digital library seek to extend its services to all official educational institutions in KSA, or perhaps expand its services worldwide?



**Dr. Saud Al Salahi:**

The challenge we are facing now is the lack of digital resources required for young generations, but we are making efforts for compiling them and undergoing negotiations with all publishing houses in this regard. Saudi Digital Library is currently collaborating with the United Arab Emirates' Advanced National Research





and Education Network initiative «Ankabut» launched by Khalifa University and Dubai Digital Library in order to establish a Gulf knowledge repository to provide digital sources.



**Moderator:**

How can we make balance between meeting the need of professors to publish their researches and writings to get promotions and providing knowledge for free to the public?



**Professor Sir Magdi Yacoub:**

Some funding institutions provided the solution to overcome this dilemma by allowing researchers to pay a portion of funding to commercial scientific jour-

“ **The challenge we are facing now is the lack of digital resources required for young generations.** ”

nals in return for allowing them to publish their researches in other open source journals; it is a compromise that satisfies all parties.

The world is moving toward providing knowledge for all for free and relying on open source platforms.



**Moderator:**

What are your notes on making knowledge available to all and supporting open sources?



**Mr. Maxmillian Angerholzer III:**

I think many countries are suffering from this problem. The United States is seeking hard to provide more opportunities for American students to study in the Middle East. I think that the world is shrinking dramatically, and we can note the noticeable improvement in the level of higher education over the past two decades.





**Moderator:**

KAUST in KSA is the best example of development worldwide.



**Dr. Saud Al Salahi:**

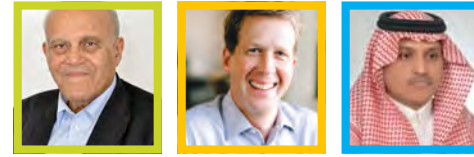
One of the key performance indicators in the vision of KSA is that at least five Saudi universities take a global position among the top 100 universities worldwide, not only King Abdullah University of Science and Tech-

nology. The Saudi Digital Library plays a central role in this regard by disseminating the Saudi scientific research production through open source platforms.



**Moderator:**

A question for all speakers. Most attendees agree to your convictions in respect of the power of knowledge, so what makes you optimistic about the status of knowledge and the opportunities for enhancing it in the Arab world?



**Dr. Saud Al Salahi:**

The greatest motives for hope and optimism are the remarkable evolution in the mentality of youth and their way of thinking, where youth seek to learn new techniques and can acquire knowledge from all over the world whenever they want. Saudi Digital Library believes that this educational environment is ideal for Saudi youth.



**Mr. Maxmillian Angerholzer III:**

The international community is facing many challenges such as the anti-globalization movement and the growth of populism and class distribution of wealth in societies and the lack of equal opportunities among society members.

I'm very optimistic about the world's youth, and I believe that education is the way to overcome these challenges, and the dissemination of knowledge is the only way to address them, there is no other way.



**Professor Sir Magdi Yacoub:**

My greatest motivation for optimism is youth enthusiasm, talents and their amazing potentials, as I experienced.



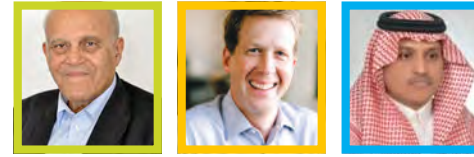
**Moderator:**

What are the steps taken to provide a better environment for the production and dissemination of new knowledge in the region?









#### **Professor Sir Magdi Yacoub:**

I suggest establishing spectacular centers of high quality in the region, working on providing an appropriate environment and opportunities for youth, encouraging innovation and creativity, providing them with easy access to knowledge and encouraging them to unleash their potentials. Youth have the required energy, talent and mentality, but they do not have opportunity to use them. Therefore, establishing centers of excellence in the region for youth is necessary so that they would not need to travel. We can provide these local institutions for them, and this is what some countries do in the region such as the UAE, Egypt and other countries in order to provide an appropriate ecosystem that encourages youth intellectual growth.

#### **Attendees' Questions**

##### **One of the attendees:**

How did you get support for the Egyptian genome studying project to identify the genes causing heart disease?



#### **Professor Sir Magdi Yacoub:**

Until now, we rely on the contributions of the Foundation employees themselves for financing the project, but we cannot continue this way for a long time because the cost is increasing. We rely entirely on donations from all segments of society and the poor are the biggest donors. We are honored to carry out this task, but we declared from the beginning that the foundation mission is not limited to the treatment of poor patients, but also includes the production of knowledge and research. This initiative aims to build genomic research capacities in Africa.



**I suggest establishing  
spectacular centers of  
high quality in the region,  
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Day 1

Knowledge Arena

Session 5

## Knowledge Capital: A Sustained Wealth

### Topics

- Knowledge: The Raw Material in the Information Age.
- Optimal Investment: Is it in Infrastructure or in Knowledge Structure?
- Knowledge Capital Development: Engines and ROI.
- The Impact of Knowledge Capital in Attracting Foreign Direct Investment.

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## Speakers

**Mr. Ron Young**

Founder of Knowledge Associates International Group of Companies

**Mr. Hussain Al Mahmoudi**

CEO - Sharjah Research, Technology and Innovation Park (SRTI Park)

**Mr. Issam Abousleiman**

Regional Director, GCC Countries – World Bank

## Moderator

**Mr. Malek Al Rougui**

Saudi Presenter and Media Professional - MBC





**Mr. Ron Young**

**Founder of Knowledge Associates  
International Group of Companies**

Mr. Ron Young is a leading international expert in strategic knowledge. He chairs the BSI Knowledge Management Standards Committee, and is a member of the ISO Standards work groups for knowledge management, asset management and quality. He was the consultant of the World Bank, the European Commission, and the Asian Productivity Organization (APO), Tokyo.



**Mr. Hussain Al Mahmoudi**

**CEO - Sharjah Research, Technology and  
Innovation Park (SRTI Park)**

He served as the Director General of Sharjah Chamber of Commerce and Industry (SCCI), and GCC Chambers for 8 years. He held leadership roles at leading regional and international companies such as Shell Group, Emirates National Oil Company (ENOC), and Dubai Internet City.



**Mr. Issam Abousleiman**

**Regional Director, GCC Countries –  
World Bank**

Mr. Abousleiman is a graduate of the Harvard University Executive Management Program and holds an MBA in finance and investment from George Washington University, as well as an MBA in management from the American University of Beirut. He is a Chartered Financial Analyst (CFA). He held several positions since joining the World Bank - Africa Region, and served as Head of Banking Products.



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**Moderator:**

Mr. Ron Young, what has changed about the nature of raw material in the information age?



**Mr. Ron Young:**

Within the context of knowledge economy, there is no scarcity of information sources. Accordingly, the fundamental change that has materialized in this economy due to the knowledge factor is our realization that we should compete with one another. Rather, the production and development of knowledge entail collaboration on our part to impart knowledge effectively.



**Moderator:**

You suggest that there is no formulated theory of knowledge economy, why is that?



**Mr. Ron Young:**

In regard to knowledge economy, we need to know when to protect our assets, but at the same time we need to identify the apt time to develop those assets. In fact, we do not have the required tools, and the biggest challenge we face is the need to articulate the theory of knowledge economy.



**Moderator:**

Mr. Hussain Al Mahmoudi, which is of greater importance: investment in infrastructure or in knowledge structure?



**Mr. Hussain Al Mahmoudi:**

I believe that maintaining a harmonious balance between the two is vital. Infrastructure plays a key role in the development of human capital and knowledge economy, and without good infrastructure, no knowl-

edge economy capable of employing private and academic sectors or catalyzing governments, can be established. On the other hand, without human infrastructure, skills, and talents, we cannot successfully attract government investments or initiatives.



**Moderator:**

Can we embark on building the knowledge structure without having a real infrastructure?



**Mr. Hussain Al Mahmoudi:**

It is necessary to know what constitutes a sound infrastructure to begin with. I believe that such infrastructure should be related to human resources as much it is to buildings, but the priority should be given to the human aspect.



**Moderator:**

Mr. Issam, will knowledge economy affect employment opportunities available in the labor market?



**Mr. Issam Abousleiman:**

There is no doubt that human capital is of great importance. The important question arises is how we can invest in it. The World Bank took the initiative in October 2018. By 2050, there will be 350 million people looking for employment opportunities in the MENA region only. Undoubtedly, this is a great opportunity for the region from the perspective of economic growth.



**Moderator:**

Mr. Ron Young, how can we invest knowledge capital to attract foreign investments?



**Mr. Ron Young:**

The World Bank answered this question when it clearly proclaimed itself as a «knowledge-nurturing bank» rather than a typical financing entity. The Bank



highlighted that it would not invest in any given country without providing evidence on possessing the needed knowledge to use this funding effectively.

I am glad that we use the word capital in reference to human capabilities and resources because it highlights the fact that human capital is an asset of great value. The Bank has done well in the past by taking the side of the people and addressing the key topic of progress through the development and management of human resources.



**Moderator:**

Mr. Hussein Al Mahmoudi, you have established a pioneering model in Sharjah and devised a long-term plan in this regard. Could you, please, elaborate on the obstacles you faced during the process?



**Mr. Hussain Al Mahmoudi:**

The UAE leadership has developed an ambitious vision for the country over the next 30 to 50 years. This vision is founded on innovation and knowledge economy. Over the past 25 years, the realization of the vision

has been set in motion by building the largest university city ever in the region; the two leading institutions are the University of Sharjah and the American University in Sharjah (AUS).

Moreover, the Sharjah Research and Technology Park (SRTIP), a 20 million-square-foot campus within the Sharjah University City, was inaugurated to serve as a platform for communication between the private, government and academic sectors. In addition, an educational investment company was established with the aim of fostering creativity and creating an environment that nurtures innovation in the country through investment in infrastructure and launching companies developing value-added products related to space sciences in new sectors and three-dimensional printing in the agriculture sector. The investment company also aims to investing in infrastructure.



**Moderator:**

Do the long years spent by young people in educational institutions without actually learning constitute a major problem in the knowledge industry, or does the mechanism of education constitute a minor problem?





**Mr. Ron Young:**

We need to learn faster. We should pay attention to the content of the curricula, and despite their great importance, we should learn the apt ways to acquire knowledge and learn in the world of globalization. We need to learn how to navigate the world of information and knowledge and how to adapt to these changes. Undoubtedly, this requires changing the curricula and university education to address innovation, entrepreneurship, and artificial intelligence skills.



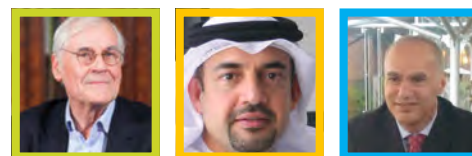
**Moderator:**

Is there a common belief in the Arab countries that population growth is a problem?



**Mr. Issam Abousleiman:**

Investment in human capital is essential in the future.



The way things are changing nowadays as far as education is concerned are remarkably different than ever. You can learn to build a small airplane by watching a short video on YouTube! As we talk about young people in this region, we should think about their future that shall be largely associated with the private sector and innovation rather than the government, and we should embark on creating the apt environment and ecosystem.



**Moderator:**

Mr. Hussain Al Mahmoudi, how do you see the future?



**Mr. Hussain Al Mahmoudi:**

In the UAE, the «One Million Arab Programmers» Initiative was launched in the Arab region. Efforts have been exerted towards the development of elementary education in the UAE and the redevelopment of universities and educational institutions to be aligned to today's key topics such as artificial intelligence, the Fourth Industrial Revolution, and space sciences.





#### Moderator:

How do you see the future, Mr. Ron?



#### Mr. Ron Young:

We talk much about the Fourth Industrial Revolution, artificial intelligence, people, and the impact of all these changes on them. Instead of harboring fear about the future and how machines and robots shall substitute human labor and perform repetitive or unfavorable tasks, we should bear in mind that man will continue to be in the lead.



#### Moderator:

What advice do you offer to decision-makers and investors? What should they avoid when investing in the knowledge capital?



#### Mr. Ron Young:

In my opinion, the decisive criterion is the mindset of individuals. Possessing the cutting-edge technologies is of no avail with wrong mindsets. Another key issue that should be addressed is ethics. I believe that the mindset and prevailing culture are the twin criteria and crucial guiding factors in this regard..



**Mr. Issam Abousleiman:**

I believe that the business ecosystem is of great importance. We need business regulations and laws, codes of ethics, contracting regulations, and courts, etc. The label market is basically in need of business enhancement and development.



**Mr. Hussain Al Mahmoudi:**

Emphasis should be laid on drafting legislations helping investors in these creative fields. Legislations should be flexible and should meet aspirations of investors and innovators. .



**Moderator:**

Mr. Ron, how should the international community in general draft such common legislations relating to investment in knowledge?



**Mr. Ron Young:**

Over the past three years, I have worked with the British Standards Institute and the International Standards Institute, which successfully issued the first ever draft international standard on knowledge management in early November this year.



**Moderator:**

How can we enhance the youth self-reliance as far as learning is concerned?



**Mr. Hussain Al Mahmoudi:**

Education is a fundamental issue and an integral part of our daily lives. At this stage in the Arab world, we are urged to introduce a new concept, namely, the scientific responsibility or research responsibility to be shared with the private sector.







**Moderator:**

Although science and research budget allocations in the GCC countries are significantly high, these efforts prove to be low-yielding; why is that in your opinion?



**Mr. Hussain Al Mahmoudi:**

I believe the reason is that the exerted efforts are fragmentary; there are no delineated plans, clear vision, or objectives. Sadly, the sole goal is getting the attention of media coverage and propaganda! As we ponder over the situation of small countries in the region, we realize that they are exerting tremendous efforts while paying lesser attention to propaganda. They work in silence and achieve remarkable leaps. This is a totally different concept from assigning care and attention to science and scientific research.



**Moderator:**

Mr. Issam, what is the plan of the World Bank in this regard?



**Mr. Issam Abousleiman:**

At the World Bank, we witness the growing demand for assistance and counsel in developing policies which countries need to achieve progress in various fields. This is not a difficult attainment, however it requires a strong political will because this change is not easily made under the umbrella of the political system.



**Moderator:**

People are highlighting the brain-drain phenomenon in the Arab world. Europe has a pioneering experience in welcoming migrated brains. What are the things these gifted people find there, but we are lacking in the Arab World?

**At this stage in the Arab world,  
we are urged to introduce  
a new concept, namely, the  
scientific responsibility or  
research responsibility to be  
shared with the private sector.**





**Mr. Ron Young:**

I believe that the education system in certain parts of the world is still playing a pioneering role and successfully attract these talents. We are naturally drawn to the successful models and this helps promote distinct education brands.



**Moderator:**

Do you have any final remark to make before we end the session?



**Mr. Hussain Al Mahmoudi:**

I believe that the region is endowed with all the required resources to launch the innovation process. As far as the human element is concerned, it is available. The same goes for the financial resources, markets,

and universities. All we need is to employ these factors and intertwine them with one another to build the desired system.



**Mr. Issam Abousleiman:**

The future of employment opportunities will not be at the hands of the government sector, and youth are the most important wealth in the Arab world today.



**Mr. Ron Young:**

The theme of this summit is youth and the future of knowledge economy. There is no doubt that the ways to manage human capital will be categorically decisive in shaping the future.



# أوبرا المعرفة KNOWLEDGE OPERA







**Day 1**  
**Knowledge**  
**Opera Hall**



# Day 1

## Knowledge Opera

### Session 1

## The Role of Legislation in Empowering Knowledge Economy

### Topics

- Enacting Legislation & Regulations conducive to business and economic activities.
- The need for laws that keep pace with rapid changes and meet the renewable aspirations and ambitions of investors.
- How the right legislative environment contributes to building a knowledge economy?





# 2018 قمة المعرفة Knowledge Summit







## Speakers

**Dr. Mansoor Abdul Rahman Al-Osaimi**

Senior Legal Advisor - Director of the Legislation  
Department, the General Secretariat of the Supreme  
Legislation Committee in the Emirate of Dubai

**Dr. Habib Al Mulla**

Executive Chairman and Founder of Baker & McKenzie  
Habib Al Mulla

**Ms. Ludmila Yamalova**

Founder and Managing Partner at HPL Yamalova & Plewka

## Moderator

**Mrs. Kiran Scarr**

General Counsel, DMCC



**Dr. Mansoor Al-Osaimi**

**Senior Legal Advisor - Director of the Legislation Department at the General Secretariat of the Supreme Legislation Committee**

He received his Master Degree in International Trade Law and PhD in International Arbitration Law from the School of Advanced Legal Studies at London University, UK. He held many governmental positions at the Dubai Police General HQ and the Office of the Ruler of Dubai.



**Dr. Habib Al Mulla**

**Executive Chairman of Baker & McKenzie  
Habib Al Mulla**

He holds an LLB in Sharia and Law from the UAE University, a Master of Law from Harvard University and a PhD from Cambridge University. In 2014, he was the Chairman of the Board of Trustees for Dubai International Arbitration Centre and the Chairman of the Chartered Institute of Arbitrators.



**Mrs. Ludmila Yamalova**

**Founder and Managing Partner at HPL  
Yamalova & Plewka**

A US qualified attorney, licensed by the State Bar of California. Ludmila was Associate General Counsel of a NASDAQ. She has practiced with DLA Piper in the San Francisco Bay area.





**Moderator:**

Dr. Habib Al Mulla, what do you think about the importance of laws and legislation, and the role assigned to them in the context of the knowledge economy?



**Dr. Habib Al Mulla:**

We realize that legislation is one of the most important tools that the government uses to influence the economy. The scope of government legislation is very broad, intersects with all sectors of the economy and affects all aspects of our daily lives. Laws and legislation are indispensable, being the tool used in the development of laws regulating the work of companies, government and the civil community. The other aspect of laws and legislation appears in the diversion from the course when they are outdated and become inconsistent with the achievement of specific policy objectives. Furthermore, we have all witnessed the economic crisis of 2008, which resulted from outdated economic legislation.

Most of the world's economies are now turning into the knowledge economy. This transition requires a re-formulation of all laws and regulations that define the criteria for success in the industrial economy and the interconnected global economy, where knowledge resources, such as professional secrets and experience, are gaining crucial importance, like other economic resources.

The increasing global nature of products and markets in the present era, employment of information technology, new media, and the interconnection between computer networks make it possible to sell, buy, and possibly deliver products and services via electronic networks. This imposes a major challenge on traditional legislators, who rely on traditional tolls and ways of thinking. Now the question is: What changes do we need to make to the existing laws and legislation? Changing legislation requires recognizing the changes imposed by the knowledge economy. First: The knowledge economy does not rely on scarcity but on abundance. Unlike most economic resources that eventually, run out through usage, we can share and develop knowledge and technology with others through application. Second, we should also realize that the impact of geographical location disappeared in some economic activities due to the utilization of appropriate technologies, and virtual markets and institutions that offer several benefits





such as: speed, flexibility, round-the-clock operations and global outreach.

It is difficult to apply laws, taxes, and methods of measurement at the local level only, since knowledge and information «leak» where demand is higher and limits are less. These differences impose a challenge on legislators to overcome in new and flexible ways while preserving the basic principles of traditional legislations, and providing the required flexibility to adapt to the knowledge economy and assimilate its unique features.



**Moderator:**

Dr. Mansoor, we would like you to share with us your opinion about the latest legislations and laws in Dubai, and about the changes that occur in legislations and the laws and their importance and impact.



**Dr. Mansoor Al-Osaimi:**

Some people do not realize that they cannot enter the world of the future relying on outdated legislations and laws. New legislations contribute to enabling and

creating different ways to employ and use these new technologies.

We face difficulties in our lives and legislations cannot ignore human needs. In all cases, we will find ourselves in need of making efforts to foresee what will happen in the next ten years, and enact proper legislations for the future, rather than amending old legislations to make them more flexible. Dubai government has developed a new process to enact legislation, embracing the future changes named «open and flexible directive legislation.» Such approach would make future legislations more flexible, adaptable and open to keep up with new technologies.



**Moderator:**

Ms. Ludmila Yamalova, what do you think about the role played by legislations and the changes we see in the quality of laws and legislations that affect the economy in the UAE from a competitive and commercial perspective?









**Ms. Ludmila Yamalova:**

At an accelerated pace, UAE enacted proper legislations, including New Foreign Direct Investment Law, which allows foreign investors to own 100% of their companies in UAE. This law reflects the actual implementation of changes that the government has been talking about for a long time. This applies to laws concerning visas to allow expatriates of specialized competencies, outstanding students, and entrepreneurs to obtain long-term visas. It also applies to anti-money laundering laws and laws regulating part-time work, and training opportunities. Moreover, UAE has launched several initiatives and has taken resolutions to meet different needs of educational institutions and academics in order to enhance their qualifications. These efforts have resulted in the prosperity of the UAE labor market, which has remarkably become a hub of professional competencies. Furthermore, there are the Domestic Worker Law, initiatives to raise the competencies and qualifications of students, and the laws of companies that are concerned with facilitating registration and licensing. The real estate sector



has witnessed huge achievements on the level of new cutting-edge innovations and legislations.



**Moderator:**

Dr. Habib Al Mulla, what impact do you expect to see in the UAE economy after ten years due to these laws and legislations?



**Dr. Habib Al Mulla:**

Local legislations contribute to directing the economy and have more flexibility and adaptability to new variables and trends in the economy. We are looking forward to introducing further required changes to legislation and laws. I believe that the starting point should be the change of commercial laws, including laws regulating arbitration, corporate law, and bankruptcy.







**Moderator:**

Dr. Al-Osaimi, what is your comment on this challenge, which Dr. Al Mulla mentioned?



**Dr. Mansoor Al-Osaimi:**

I strongly believe that many of the current legislative entities, both in UAE and elsewhere in the world, will not

exist in the future, and the great impact of technology will be reflected in the legislative process. Most of the world's legislative entities, and even parliaments, will not exist in the future, and this is the nature of evolution and growth. I think that all legislative entities will adopt these new technologies in the future and will be able to meet these new requirements and variables.



**Moderator:**

Ms. Ludmila Yamalova, what opportunities do you expect for UAE in light of all the mentioned information?

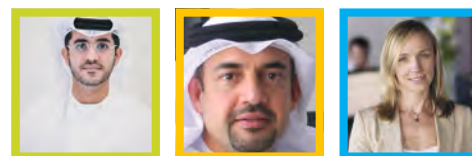


**Ms. Ludmila Yamalova:**

I was happy that Dubai Airport applied the face recognition technology to confirm the identity of passengers, shortly after speaking about its implementation, which is amazing. Another example is the high-speed transmission technology, known as »HyperLoop«, and the government's keenness to implement and adopt digitization to facilitate business in the country. I am really amazed at the speed with which the UAE is moving towards the adoption of these new and sophisticated technologies compared to the rest of the world, and the efforts to develop legislations and laws governing business and life in general in UAE. I am certain that a bright future of progress and more opportunities await UAE.



**I am really amazed at the speed with which the UAE is moving towards the adoption of these new and sophisticated technologies.**



**Attendees' Questions**

**One of the attendees:**

What are your plans for legislators and lawmakers, and your plans to invest in them?



**Dr. Mansoor Al-Osaimi:**

The Supreme Legislation Committee provided employment opportunities for more than 20 persons in UAE, as well as a number of consultants from outside UAE. In addition, the Committee employs Emirati graduates and offers them training opportunities to increase their access to advanced legislations and to train them to utilize modern technologies..

**One of the attendees:**

Do you think that legislative entities have to publish explanatory notes with laws and legislations they issue, or is it enough to publish laws and legislations in the gazettes?











**Dr. Habib Al Mulla:**

The procedure in force in UAE has always been to publish issued laws and legislations in the gazette. Legislative entities consult the relevant authorities and sectors during the drafting stage of laws; to ensure that the laws and legislations comply with various requirements before they are officially issued. However, I think that this is not enough. I used to insist on conducting a public consultation with the audience before issuing financial laws and legislations in the Federal Customs Authority. This is a standard procedure within the practices of legislative entities all over the world, where legislative entities publish drafts of laws and legislations on their website for the public to see within 30 or 60 days, to receive their comments. This move comes after sending the drafted laws and legislations to the concerned authorities, including law firms, for consultation and comments. As to the question of the importance of issuing explanatory notes with laws and legislations, I believe we need to apply this practice for sure.



**Dr. Mansoor Al-Osaimi:**

Explanatory notes of laws and legislations are certainly a good step. I agree with you regarding the feasibility of explanatory notes in this regard, and the Government may seek to adopt this strategy in the future.

**One of the attendees:**

How can the government sector and the private sector support scientific research prepared by masters and doctoral students? We see shortcomings in this regard, where recommendations and findings of students in their research are confined to books and libraries and are not used.



**Dr. Mansoor Al-Osaimi:**

I believe that this role is entrusted to universities and educational institutions that should take the initiative and present these recommendations and findings of the students to the government; to use, employ and apply them in actual world.





# Day 1

## Knowledge Opera

### Session 2

## Giving to Empower Knowledge

### Topics

- The economics of giving: How philanthropists contribute to moving the wheel of the economy?
- Smart giving: Donate... Educate... Employ.
- Philanthropists: patrons of change towards knowledge economy.
- Knowledge sharing to consolidate efforts of donors.

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# قمة المعرفة Knowledge Summit



2018 Knowledge Summit

Dr. Sharif  
Chairman of the board

Knowledge Summit

Knowledge Summit

Sharif  
Fund





## Speakers

**Mr. Badr Jafar**

CEO of Crescent Enterprises

**Mrs. Shiza Shahid**

Co-founder of the Malala Fund

**Dr. Shamsh Kassim Lakha**

Chairman of the Board of the University of Central Asia

## Moderator

**Mrs. Rebecca McLaughlin-Duane**

Euronews' Inspire Middle East Anchor



**Mr. Badr Jafar**

**CEO of Crescent Enterprises**

President of Crescent Petroleum, the Middle East's largest privately-owned petroleum company. He serves on the Board of Advisors of Sharjah Entrepreneurship Centre (Sheraa) and Gaza Sky Geeks, and is Chairman of Endeavor UAE. Badr was honored as a Young Global Leader by the World Economic Forum in 2011.



**Mrs. Shiza Shahid**

**Co-founder of the Malala Fund**

An entrepreneur, investor, and thought-leader. She graduated from Stanford University with University Distinction, as well as from Singularity University where she studied how to apply technology towards solving gender inequities. Shiza co-founded the Malala Fund with Malala Yousafzai, and led the organization as founding CEO through to the Nobel Peace Prize.



**Dr. Shamsh Kassim Lakha**

**Chairman of the Board of the University of Central Asia**

He is the Diplomatic Representative of the Aga Khan Development Network to the Kyrgyz Republic. Dr. Lakha served in senior positions in the Pakistan government, as Minister of Education and as Minister of Science and Technology. He has received honorary degrees from McMaster University, Canada and the Aga Khan University as well as the high civil honors from the Presidents of Pakistan and France.



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**Moderator:**

Can you explain the reason to participate in the Summit?



**Mrs. Shiza Shahid:**

My work is focused on investment in startups; I am interested in technology companies that make the world a better place, with focusing on investment in ideas.



**Dr. Shamsh Kassim Lakha:**

I founded the Pakistan Centre for Philanthropy, chaired it for 15 years, and witnessed the huge difference it made. I am participating in the Summit to highlight our experience in the philanthropy field.



**Mr. Badr Jafar:**

I seek employing good governance in building a stronger economic base to create more jobs in the region. I am passionate about a number of nonprofit activities and I am glad to have the opportunity to participate in this session.



**Moderator:**

Can charities have an economic impact on the community?



**Mr. Badr Jafar:**

Philanthropy has proven to be very effective in devising different ways to promote the transition of private capital into public service, and generate a multiplier effect on commercial and government capitals.





**Dr. Shamsh Kassim Lakha:**

There are various types of charitable giving and philanthropic works like endowments for hospitals, schools, or wells. Sadly, these charitable channels are completely overlooked in modern times.



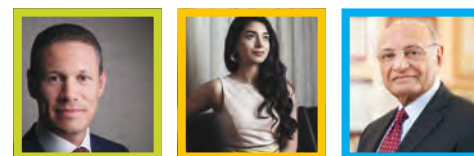
**Moderator:**

What is new in the agenda of giving, positive social work, and philanthropy?



**Mrs. Shiza Shahid:**

Pondering over the role of philanthropy in the present time, I realize the big challenges hindering its progress. Philanthropy should play a key role in supporting scientific research to find its way to the pub-



lic, enter the market, and eventually yield sustainable products or profits. When it comes to the millennium generation, the figures show that charitable giving and philanthropy are prosperous. However, I believe that the more important step is to provide greater motivation for charities to give more and carry out philanthropic work.

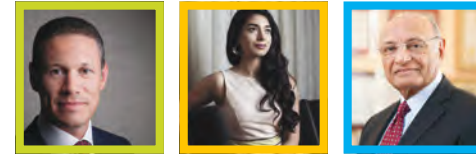


**Mr. Badr Jafar:**

I believe that the situation is extremely positive; contemplating the cultural change and the culture of giving among generations, we will find an increased long-term risk appetite. The fact that our region has non-profit accelerators is very promising. Feeling more conveniently at ease with technological and online giving is perfectly acceptable. The millennium generation show greater readiness to cooperate in overcoming different challenges. Accordingly, all these factors are propitious or at least moving in the positive direction as far as the future of philanthropy is concerned.







**Moderator:**

What is the role of technology in the sustainability and future of philanthropy?



**Dr. Shamsh Kassim Lakha:**

Digital charitable platforms are of great importance. Charities and philanthropic foundations are increasingly drawn to the internet. People visit the charities' websites before taking the decision to donate to any given non-profit organization. We should bear in mind that the technology arena is not the exclusive domain for great ideas; they find their way to philanthropy field as well. Online giving is the future of philanthropy; we would be missing out great opportunities, if we failed to enter this field.



**Moderator:**

How can we attract new talents to the philanthropic sector?



**Mrs. Shiza Shahid:**

There is a culture of recession in the non-profit sector. I believe that we should change this culture and allow philanthropists to evolve because this is what the talented young people aspire to achieve.



**Moderator:**

Mr. Badr, do you agree?



**Mr. Badr Jafar:**

It is very simple, if you want better people, you have to pay in a better way. This is what companies do and there is no reason for NPOs to be the exception.







**Mrs. Shiza Shahid:**

This does not mean that we must pay one million dollars for CEOs in non-profit organizations, but I think we should pay them well enough. I think employing outstanding talents at half cost is good for non-profit organizations. Besides, these talents should be convinced that their jobs here will make the world better, compared to their jobs in other companies, where they may feel that they do not have the same impact. Therefore, it is important to determine people priorities, growth opportunities and the available opportunities.



**Dr. Shamsh Kassim Lakha:**

On the one hand, we need to have talented teams to manage charity funds effectively, and on the other hand, we want to hold them accountable and want them to work for free! This is simply inapplicable! Therefore, I believe that we should pay people decently, emphasize their accountability, and expect them to

act on the responsibility invested in them and show more dedication and commitment to non-profit works more than the commercial ones.



**Moderator:**

How can we develop the role of philanthropy in two different income generation models?

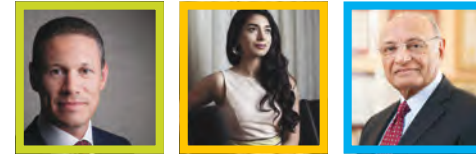


**Mrs. Shiza Shahid:**

I believe that the culture of respect has changed because there are no regulations organizing non-profit work, clearly identifying what is allowed and what is not in non-profit organizations, meaning to accept or approve requests for investments. We need to devise legal methods to address this issue.

**One of the attendees:**

How can we control the standards of non-profit organizations? How could we verify that these organizations are acting for the good of society?



about their work. They believe that donors are not entitled to closely monitor the work. There are also official non-profit bodies like «Navigator», which is probably the best-known charitable organization, and I believe it established Charitynavigator.org, an organization that evaluates charitable organizations and philanthropic foundations. Moreover, donors can visit the websites of these charities and check their financial statements.



#### **Mrs. Shiza Shahid:**

Some NPOs are doing a better job than others. For instance, «Charity: Water» wins the approval of some people and the disapproval of others. It raises funds separately from a group of private donors to cover the administrative costs. All online donations go directly to financing charitable projects. The charity digs wells and builds large communities.

They proclaim assigning a big team of computer experts to develop a program that tracks donations, so you as a donor can know specifically where the money goes and how it is spent. Other NPOs, on the other hand, do not publicize such delineated details



#### **Mr. Badr Jafar:**

I think the best effective way is the indirect way. You need donors, who want the best quality of data and information in terms of measuring the impact, and the uses of donation funds. If donors did not demand these actions, there will be no incentive for beneficiaries to provide that level of information; therefore, I think donors should start this direction first. Simply, there is no excuse for the beneficiary and there is no excuse for organizations not to clarify the matter. I think it is all about culture; only 5% of Zakat and charity funds is enough to cover actually the Global Humanitarian Assistance whole budget.





**Moderator:**

What do we need now? What is the significant impact the NPOs are set to have?



**Mrs. Shiza Shahid:**

We need to attract donors from various cultures and communities, engage them more, and support them through new models and ways of giving.



**Dr. Shamsh Kassim Lakha:**

I agree that the golden rule is that he who has the money sets the rules. However, the donors are entitled to hold the NPOs accountable; this is the required transparency in the philanthropy field.



**Mr. Badr Jafar:**

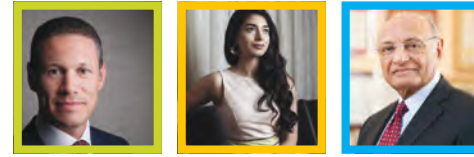
I believe that the society and the non-profit sector can help provide the compass to direct both private and public capital towards the identification of means to address challenges under the umbrella of technology and the knowledge economy.



**Dr. Shamsh Kassim Lakha:**

I think that the responsibility for the development of values is one of the important factors in this regard and the matter is not limited to instilling the values only. I say that one of the things that we think about today when we look at our youth and the future is that we need to integrate values, such as giving, volunteering work, or feeling others' sufferings, into our educational system. As His Highness Sheikh Mohammed Bin Rashid Al Maktoum said, «Human beings can never feel contented until they start giving». This comment really amazed me. I think the more you give, the more you become stronger.





**Moderator:**

Shiza, do you agree with Dr. Shamsh?



**Mrs. Shiza Shahid:**

Of course, He has done a great job.



**Moderator:**

Mrs. Shiza Shahid, are you optimistic about the short and medium term future?

“ **Human beings can never feel contented until they start giving.** ”



**Mrs. Shiza Shahid:**

Yes, I am very optimistic and I believe things will change for the better in the next two decades. I think technology will reshape our knowledge and interests.



**Moderator:**

Mr. Badr Jafar, what do you expect from this Summit which is held in the UAE?



**Mr. Badr Jafar:**

The huge amount of Zakah and charities amounting from \$250 billion to one trillion spent every year furnishes a great opportunity for us to bridge the gap and address all the outstanding crises. If the Summit successfully achieved this milestone, it would be a great start.



# 2018 Knowledge Summit | المعرفة قمة



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# Day 1

## Knowledge Opera

### Session 3

## Utilizing Knowledge to Improve Healthcare

### Topics

- HealthCare: knowledge-intensive industry.
- Improving healthcare outcomes through knowledge production and dissemination.
- The role of tech Innovation in reducing healthcare expenses.





**Mr. Conor McCarthy**

**International Business Development  
Lead, Babylon Health**

His role at Babylon Health is to establish partnerships in Arabian Gulf Region. He joined Babylon as one of its first employees, which have now scaled to over 1,000 employees in 4 years with global offices in New York, Austin, Vancouver, Kigali, Kuala Lumpur as well as London.



**Dr. Reem Osman**

**CEO of Saudi German Hospitals Group**

She has a Master's degree in Ophthalmology and Eye Surgery, a Master in Business Administration and Management Healthcare delivery from Harvard Business School. She also served as the Advisory Board Member of the School of Health and Environmental Studies (SHES) at Hamdan Bin Mohammed Smart University (HBMSU).



**Dr. Ziad Sankari**

**Founder of CardioDiagnostics**

Ziad completed a BE in Computer Engineering at the American University in Lebanon, worked as a telecom engineer, and later received a Fulbright Scholarship to pursue double Masters in Electrical Engineering and Biomedical Engineering at the Ohio State University.

## Speakers



### **Mr. Conor McCarthy**

International Business Development Lead, Babylon Health

### **Dr. Reem Osman**

CEO of Saudi German Hospitals Group, UAE

### **Dr. Ziad Sankari**

Founder, CardioDiagnostics

## Moderator

### **Brig Dr. Ali Singel**

Director of Dubai Police Health Centre





**Moderator:**

Mr. Connor, Let us talk a bit about Healthcare field.



**Mr. Connor McCarthy:**

We in Babylon Health are trying to provide healthcare service at affordable prices. More than 50% of the world's population does not have access to basic healthcare services.

At Babylon, we believe that the cost of healthcare has two problems: First, people or salaries; as salaries consume about two-thirds of healthcare expenditures. Second, timing; i.e. solving disease problem at early stages when it costs about \$10, instead of waiting for a solution with hundreds of dollars. Therefore, we in Babylon are developing basic techniques to deal with both problems by trying to use time optimally and predict health problems before they happen.



**Moderator:**

Will this affect medical schools and what doctors learn?



**Mr. Connor McCarthy:**

This is what we call knowledge-based learning. We are trying to create the so-called (artificial intelligence brain) to change the doctor's knowledge by preparing large and comprehensive data sources.



**Moderator:**

We have old school and contemporary modern school, and there are doctors and professionals who are against technology, how did you manage to overcome that problem?





**Mr. Conor McCarthy:**

We want to utilize artificial intelligence applications that can help us recognize the symptoms, diagnosis, and receive treatment; there is no need to see a doctor. We are trying to imitate doctors' minds in terms of dealing with patients. We have developed a group of capabilities (artificial intelligence mind), which allows us to do many things that are done by doctors. One of those capabilities is knowledge base, which is a huge database collected from what is taught in medical schools or stated in scientific journals, and always updated with the latest researches. It is the largest one in the world, with 530 million medical statements.



**Moderator:**

Will artificial intelligence replace doctors?



**We have developed a group of capabilities (artificial intelligence mind), which allows us to do many things that are done by doctors.**



**Dr. Reem Osman:**

No, it will replace the nursing or the operator, then eventually the referral will be to the doctor.



**Moderator:**

What will occur if the doctor has the diagnosis? How will technology help him?



**Dr. Reem Osman:**

When we talk about technology and automation, we are talking about the maximum limit. Technology may or may not replace doctors. There is no doubt that technology will help us improve the work of doctors by saving their time, improving the accuracy of their work and producing accurate diagnoses. We also use artificial intelligence in the field of radiation medicine and get more accurate and effective results, which makes the lives of doctors and patients easier.











We also presented the Robotic Pharmacy, which will enhance the treatment accuracy by providing appropriate treatment to patients in a timely manner and in appropriate dose. We deal with mobile applications such as e-health, so that patients can access their records directly, as well as help doctors access their patients' records via mobile phones. This, in turn, will help speed up conversations between doctors and patients. We are now working on treating chronic diseases. We send reminders to patients about medication time, and all this will result in better healthcare and lower costs.



**Moderator:**

What about Artificial Intelligence and Genetics?



**Dr. Reem Osman:**

Artificial intelligence helps with providing customized treatment plans. The system can determine the best treatment plan for the patient by diagnosing his condition, through his own file, his medical report, and his family history.







**Moderator:**

Will we see this ad hoc system in other hospitals?



**Dr. Reem Osman:**

Dubai Health Authority is working hard on this. Electronic prescriptions, e-health reports and e-submission of invoices have become mandatory for all private sector and health service providers.



**Moderator:**

Do you share any information you have with others?



**Dr. Reem Osman:**

Yes, we share information with Dubai Health Authority, and they are responsible for preparing sta-

tistics, to help them study and analyze the health-care situation in Dubai.



**Dr. Ziad Sankari:**

We, at the foundation of Cardiodiagnostics, care about heart medicine and heart related-problems. The biggest problem facing us is that there is a large number of patients suffering from tachycardia, as this disease cannot be diagnosed easily. Therefore, we created a new technology that allows us to follow-up patients for a longtime outside hospitals. That new technology reduced the cost of follow-up in hospitals, achieved better access for patients, and provided the proper conditions to follow up with their heart condition for a long time and in a better way, without having to be in hospitals. Moreover, we have built the first follow-up center in the Middle East, serving patients from Turkey, the Gulf countries reaching Australia and some European countries. In addition, the United States has its follow-up center.

I strongly believe that artificial intelligence has something to provide, which is much more than what appears now on the scene. Meanwhile, healthcare is a deep knowledge-based industry, and you cannot easily replace technology, at least today. Yet, technology

allowed us to have better healthcare, with affordable low cost. At this point, technology and artificial intelligence can be used to the fullest.



**Moderator:**

Will technology affect patients' feelings?



**Dr. Reem Osman:**

Sometimes technology is important, but if you do not use it well and explain it to patients well, they will complain. It is also important that patients be well educated about machines, their role and importance. We need to continue convincing them that they are easy to use and convenient, and then this concept goes to the patient, and is pleased to add the technology element to the treatment plan.

**Attendees' Questions**

**One of the attendees:**

Will we use artificial intelligence in the future for clinical pharmacology? Will we find an application that reduces the rate of error in this regard?



**Mr. Conor McCarthy:**

I think technology can reduce the error in this regard. There are human errors that cannot be denied, but if machines can perform some tasks or processes that people perform without human intervention and more accurately, that will be a good thing.



**Dr. Reem Osman:**

Currently, in the field of artificial intelligence, there is the so-called customized treatment plan project, and there are a lot of IT companies that are developing this type of projects.

**One of the attendees:**

Will the cost of medicine be reduced as a result of the use of technology?





**Dr. Ziad Sankari:**

Certainly, technology allowed us to access a better healthcare at a more affordable low cost. Diagnosis will be faster and more accurate; diagnosis that is more accurate leads to lower cost.



**Dr. Reem Osman:**

When we talk about artificial intelligence or technology, we talk about early detection of disease, preventive medicine, and appropriate follow-up, which helps to reduce costs. On the other hand, robotic surgery greatly helps to speed up recovery and rehabilitation of the patient, where the patient stays for a short period in the hospital and this reduces the cost.





**Mr. Conor McCarthy:**

The question now is, why cannot we provide information about the possibility of diagnosing diseases globally to all people? We have many applications that we can publish in every market in the world, and once you translate such information into several languages, it will be very valuable to everyone.

**One of the attendees:**

In the future, will we see a role for technology in proactive prevention?



**Mr. Conor McCarthy:**

We are already working on this. For example, we have focused on assessing people through a health check that answers several questions that illustrate the entire health status, and thus we can see the probabilities of various diseases.



**Dr. Reem Osman:**

With regard to preventive medicine, there is the so-called predictive medicine, where patients can be analyzed and their similarities are known. The system analyzes the patient's medical history and knows whether he is a diabetic for example. Accordingly, an intensive patient education program can be performed with the help of artificial intelligence.



**One of the attendees:**

What is meant exactly by robotic surgery?



**Dr. Reem Osman:**

For robotic surgeries, the doctor sits on his or her machine to operate the robot, while the robot carries out the operation; opens the body and stitches the wounds. As a result, the rate of bleeding and infection is less, and recovery is faster.



**Moderator:**

I think there are a lot of innovations and techniques to displace the human side of the field, leaving the arena for machines to do everything!



**Mr. Conor McCarthy:**

I believe when we get rid of emotions and feelings in the field of surgery, the effect will be great.



**Moderator:**

Will technology affect the nature of medical research?



**Dr. Ziad Sankari:**

Sure, what we do with artificial intelligence through machine learning is that you get a great volume of

knowledge through the best surgeons, doctors and researchers.

Afterwards, you put such knowledge in one place, and you have a deep network, which you control in a certain way, train it in the data, and make this knowledge available to all, the thing that makes the level of healthcare better.







**One of the attendees:**

How can I trust artificial intelligence regarding my medical information? How can we ensure the security of the artificial intelligence against hackers?



**Dr. Ziad Sankari:**

Here comes the big role of governments. In the United States, they have a law that tackles the protection of health information or personal information of the pa-

tient; known as the Health Insurance Portability and Accountability Act (HIPAA).

**One of the attendees:**

How will artificial intelligence and technology affect cancer treatment of all kinds?



**Dr. Reem Osman:**

Preventive medicine using artificial intelligence has

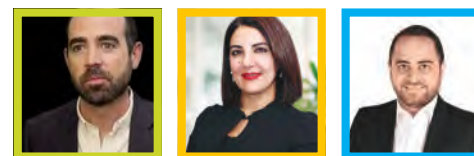


become able to predict people who are at risk of cancer. Before the person becomes a cancer patient, you can treat cancer before it starts spreading.



**Mr. Conor McCarthy:**

There are many investments in medical research, and I will say that artificial intelligence helps with this research, as we can understand a lot of information in



a much faster time than it would take to understand it for hundreds of years.



**Dr. Ziad Sankari:**

I strongly believe that technology will make our world better.



**Dr. Reem Osman:**

Technology should be used in the full cycle of health-care to build a strong healthcare sector.



**Mr. Conor McCarthy:**

Basically, we need to use the knowledge we have, share it with others, and then deploy it intelligently all over the world.





# Day 1

## Knowledge Opera

### Session 4

## Islamic Economy and its role in Knowledge Economy

### Topics

- Islamic finance as engine in global economy.
- Halal Industry: A trillion-dollar business.
- Digital Islamic Economy: Is it a knowledge economy?
- Information sharing between Islamic financial markets.
- Islamic knowledge as a pillar of Islamic economy.





# 18 Knowledge قمة Summit المعرفة



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**Mr. Abdulla Mohammed Al Awar**

**CEO of Dubai Islamic Economy  
Development Centre**

He holds a Bachelor of Science degree in Business Administration from the University of Colorado at Boulder, US. He is also a graduate of the Mohammed Bin Rashid Program for Leadership Development. Prior to his current role, Al Awar was the CEO of Dubai International Financial Centre (DIFC) from 2009 to 2012.



**Baroness Sayeeda Warsi**

**British politician and lawyer**

Baroness Sayeeda Warsi is a Member of the House of Lords. She was Britain's first Muslim Cabinet Minister, Chairman of the Conservative Party 2010-2012, and a Minister at the Foreign Office 2010-2014. She also chaired the Global Islamic Finance & Investment Group.



**Mr. Mohammed Daud Bakr**

**Chairman, Shariah Advisory Council  
Bank Negara Malaysia & Securities  
Commission-Malaysia**

Founder and Executive Chairman of Amanie Group. Currently, he serves as the Chairman of the Shariah Advisory Council at the Central Bank of Malaysia, the Securities Commission of Malaysia. He received the «Award of Excellence for Outstanding Contribution for Shariah Leadership & Advisory».



## Speakers



### **Mr. Abdulla Mohammed Al Awar**

CEO of Dubai Islamic Economy Development Centre

### **Baroness Sayeeda Warsi**

British politician and lawyer

### **Mr. Mohammed Daud Bakr**

Chairman, Shariah Advisory Council Bank Negara  
Malaysia, Securities Commission-Malaysia & Abu Dhabi  
First Bank

### **Mr. Harris Irfan**

Chairman, UK Islamic FinTech Panel; Partner, Gateway  
LLP and MD, Cordoba Capital Ltd.

## Moderator

### **Dr. Areef Suleman**

Director of Economic Research and Institutional Learning  
at the Islamic Development Bank in Jeddah, Saudi Arabia







#### Mr. Harris Irfan

**Chairman, UK Islamic FinTech Panel;  
Partner, Gateway LLP and MD, Cordoba  
Capital Ltd.**

Mr. Harris Irfan is the Chairman of the UK Islamic FinTech Panel and Partner at Gateway LLP, the professional services firm. He is the author of the critically acclaimed bestseller, «Heaven's Bankers: Inside the Hidden World of Islamic Finance». Harris is an investment banker with 25 years of experience in London and the Middle East. Harris has a degree in Physics from the University of Oxford.







**Moderator:**

The term «knowledge economy» traces back to fifty years ago. However, the history of Islamic economics dates back to the seventh century and is based on ethical values and the principles of Islamic Shariah. Let us start with Abdulla Mohammed Al Awar. The volume of Islamic economy is about \$3 trillion, what are the prospects of growth and development in this sector?



**Mr. Abdulla Mohammed Al Awar:**

The Global Islamic Economy Report 2017 stated that the volume of economy in this flourishing sector exceeded \$1.8 trillion and is expected to reach \$2.6 trillion within 3 or 4 years. This also applies to the Islamic financing sector, as the value of assets in the sector was estimated to be \$2.4 trillion all over the world. In addition, it is expected to exceed \$3.33 trillion by 2021.



**Moderator:**

By mentioning the Islamic economy sector specifically, how can we achieve more growth in this sector to reach \$10 trillion?



**Mr. Mohammed Daud Bakr:**

I think the way to increase the volume of Islamic economy sector to reach \$10 trillion within 5 years is by making the Halal products not only for Muslim consumers because the issue is related to high safety standards and care about the source and quality of food products. Moreover, we should utilize modern technological techniques to promote transparency.

**Many British people express their concerns regarding the spread of Halal food, accordingly political movements against Halal food in markets were established calling for prevention of selling such products.**





**Moderator:**

What are the challenges that you see in the United Kingdom, which contribute to undermining the brand of Halal industry and leading to loss of credibility among consumers?



**Baroness Sayeeda Warsi:**

I believe that the brand of Halal products, which is represented in Shariah in the West, has certainly lost its credibility among the Western consumer. Let us take food production as an example, many British people express their concerns regarding the spread of Halal food, accordingly political movements against Halal food in markets were established calling for prevention of selling such products. In addition, once there is an advertisement regarding selling Halal food, a political debate has arisen due to demonstrations and objections to express concerns about «forcing» them to eat Halal food, as they do not have the freedom of choice.



**Moderator:**

Mr. Harris Irfan, Baroness Sayeeda Warsi spoke about building the brand and the Islamic finance, can you highlight this point?



**Mr. Harris Irfan:**

If we talk about the brand of Halal products in general, in United Kingdom for example, it will be limited mostly to meat and banking industry. Of course, there are other elements of Halal economy that we can mention. However, the meat and banking industry are the most prominent in Britain. Furthermore, the reason behind the weak performance of Islamic banks is the lack of cultural understanding and rapprochement with customers due to the gap that exists between Islamic banks and their customers. I think that the knowledge economy is significantly responsible for restoring the link between customers and those services and products.





**Baroness Sayeeda Warsi:**

Commenting on Mr. Harris Irfan's comment, for a long time, our focus was on slaughterhouses that were keen to observe slaughtering according to the Shariah way. However, on contemplating what Harris said, we recognize that there are more principles related to the concept of Halal in the Shariah context such as: Animal welfare, provision of care and food, and ways of slaughter.



**Mr. Harris Irfan:**

Thank you for introducing this important topic. The concept of Halal food in Islam extends to include all stages of the industrial chain of Halal products and is not limited only to the method of slaughter.



**Mr. Abdulla Mohammed Al Awar:**

When we compare the Halal industry and the Islamic financing sector to the traditional products, we find that the difference of Shariah Rules-related aspect does not exceed 10-20% at most, especially in the Islamic financing sector. The competition among banks are focused on customer service, quick responsiveness, services delivery, and provision of products; all of these concerns are not related to complying with the Shariah Rules.



**Baroness Sayeeda Warsi:**

With respect to using technology, bureaucracy and customer service in general, Islamic banks in Britain have failed to achieve success in Islamic market, and certainly failed to penetrate the non-Islamic market.



**Moderator:**

From the perspective of knowledge economy, how can we achieve knowledge exchange between Malaysia and UAE market from one hand, and the Western markets on the other hand? How can we imitate some good experiments in the West and other countries where the number of Muslims is decreasing?



**Mr. Mohammed Daud Bakr:**

We should strengthen the ecosystem of any industry, whether financing or Halal industry, like any other economy in the world, such as the economy sector of mining, oil or tourism. We have to be aware that we cannot find a single solution to all problems. Shariah does not provide one solution to all problems, even with regard to simple matters such as dealings and marriage. The second issue is the need to invest in techniques of big data and artificial intelligence.







**Mr. Harris Irfan:**

I think, without focusing the efforts on FinTech, the Islamic banking services will lose the way. The future of Islamic financing and banking services lies in expanding the scope of the market to include non-Muslims as well.



**Baroness Sayeeda Warsi:**

It is also important to expand the scope of Islamic financing products market, and we should focus on the importance of continuing the process of development and innovation of new products in all sectors.



**Moderator:**

We talked about technology, product innovation and safety standards and Dr. Mohammed Bakr mentioned the digital economy, can we adopt this concept in the context of Islamic economy?



**Mr. Mohammed Daud Bakr:**

We should establish an Islamic digital economy and provide high-quality digital products and services. Digital Islamic economy provides multiple advantages, it does not differentiate between old and new investors, and there are no restrictions or limits to what you can achieve. Success is only subject to collecting and utilizing knowledge, choosing the right system, and hiring the appropriate expertise. You can

simply surpass the major companies in the market, and here lies the beauty of the digital economy.



**Mr. Abdulla Mohammed Al Awar:**

From my point of view, the ideal frame, in my opinion, is to look at the issue from two aspects; we have in mind the pillars of Islamic economy, such as Islamic financing and the Halal industry, including Halal food, clothes and others. In addition, there are the pillars of empowerment, such as the digital economy and knowledge in the context of learning, information etc., and we cannot neglect the importance of standards within the pillars of empowerment. Furthermore, we have to achieve balance through providing those three pillars within the efforts of the government and the private sector.



**Mr. Harris Irfan:**

The future is for programming, coding and computer science. I hope that the future of Islamic banking industry would be based on computer science.



I do not think that the holders of economic degrees are able to develop the Islamic economy, but those concerned with the use of technology in the Islamic economy sector are. I strongly support what is happening in the Islamic economy sector recently: Such as holding smart conferences and employing Block-chain and other modern technologies.



**Moderator:**

In one of your articles, you addressed the concept of business that considers ethical values. Can you highlight this topic?



**Mr. Abdulla Mohammed Al Awar:**

In 2006, the International Halal Integrity Alliance (IHIA), a global nonprofit organization comprising various Halal accreditation bodies, was established in UAE.

The Alliance began with 9 countries and now comprises 33 countries. Its role is to standardize the processes and standards adopted in various





accreditation bodies, and the greatest role is to develop Halal products trade, which contributes to the expansion of healthy Halal food products market to include a wider base of consumers..



#### **Baroness Sayeeda Warsi:**

Despite the ethical principles and basis upon which the Halal industry is based, many Halal products are bad and unhealthy, besides the aspect of animal welfare, transportation routes and the type of food.

#### **Attendees' Questions**

##### **One of the attendees:**

Why do we insist on changing the name of Islamic financing into Sharing System? Why do you feel ashamed of the title "Islamic Financing"?



#### **Mr. Mohammed Daud Bakr:**

I do not care much about names; we can promote Islamic services and products under the name of banking transactions that take into account ethical considerations, or other names that fit the market. The most important issue is the provision of appropriate ecosystem and exertion of real efforts in this regard.





#### Mr. Harris Irfan:

Activities of many companies comply with Shariah Rules, yet they realize that classifying them under the name of «Islamic» causes the reduction of their market share. The names of «Islamic» or «in compliance with Shariah Rules» may not be feasible in some markets. I am deeply convinced that keeping the compliance



standards with Shariah Rules is necessary in respect of provided products and services.

#### One of the attendees:

Why is Islamic financing still isolated from the global economy?



#### Mr. Mohammed Daud Bakr:

We cannot force the consumer to choose Halal products and services in compliance with Shariah. However, we can enhance the role of transparency through depending on technology; this is the future. Consumer can know the source of products and the standards approved along the industrial chain.



#### Mr. Abdulla Mohammed Al Awar:

From the technology perspective, the achievement of these goals is not difficult or impossible, however the secret lies in the fact that those services are market and demand-driven.





**Moderator:**

I ask the speakers to give a final comment at the conclusion of the session.



**Mr. Abdulla Mohammed Al Awar:**

What we hope to achieve is to unify the Halal standards and compliance with Shariah rules in all Muslim societies around the world.



**Baroness Sayeeda Warsi:**

I'm looking forward to the time in which we can ensure that the Halal food we are buying is Halal, healthy, and complying with the ethical considerations.



**Mr. Mohammed Daud Bakr:**

We have not yet determined any Shariah rules for Islamic digital economy to determine Halal and Haram in this vast space with regard to entertainment, programs and applications. In addition, the next step is exerting unremitting efforts in this regard.



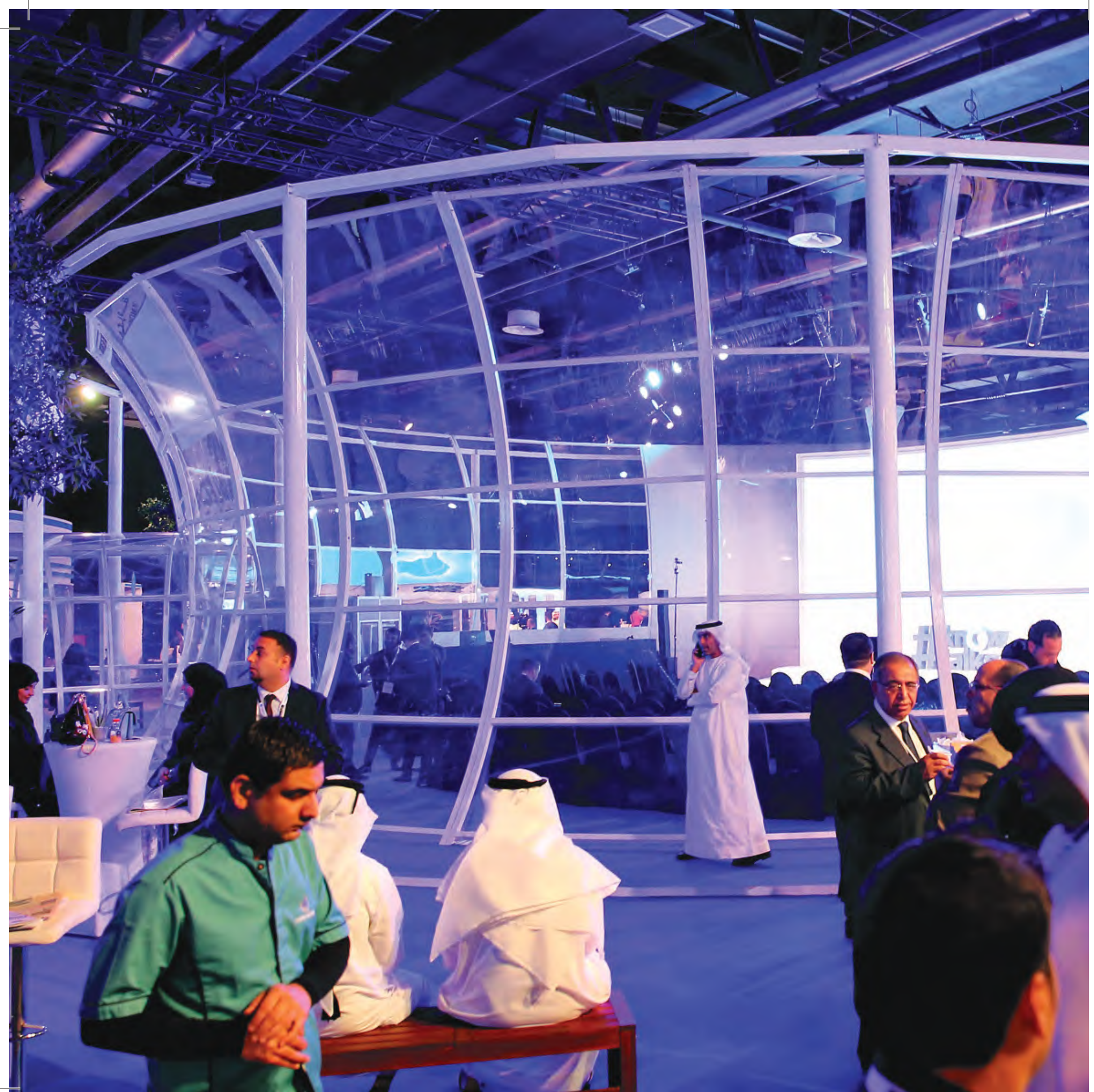
**Mr. Harris Irfan:**

Speaking about Islamic Financing and the Islamic banking services in particular, we do not have the welfare to choose the fulfillment of consumer requests in this industry or not.













## Day 1

# Know Talks Hall



# Day 1

## Know Talks

### Session 1

## Social Innovation

#### Topics

- Innovation and its historic role in achieving prosperity.
- Why do all countries of the world not have the adequate access to prosperity?
- The vision of HH Sheikh Mohammed bin Rashid Al Maktoum and the UAE for innovation.
- Sheikh Mohammed Bin Rashid Al Maktoum's Initiative for Global Prosperity.



**WHAT DOES IT TAKE TO BUILD A  
KNOWLEDGE ECONOMY?**





## Speaker

**Mr. Badr Al Olama**

**Director of Aerospace & Defense, Mubadala  
Investment Company**

He holds a bachelor degree in Sharia and law from the United Arab Emirates University (2002), and Master's degree in law from Harvard. Mr. Badr started his career as an advocate and legal consultant at Baker & McKenzie Habib Al-Mulla, formerly known as Habib Al Mulla & Company. He is a former Chief Executive of Strata.



First, I would like to talk about the requirements of building knowledge-based economy. Everyone is familiar with the UAE Vision 2021, and Abu Dhabi Vision 2030. Both visions aimed at diversifying the economy away from oil and gas, and the transition to a knowledge-based economy.

We have oil, which is a great blessing. What can we do with such wealth? The wealth is not the only source of prosperity. There is an example in Al Ain, where we wanted to build aircraft parts manufacturing facility in Al Ain desert. After ten months, the facility was established. In addition, it became ready to start the manufacturing process. We faced the challenge of building a clean room because manufacturing aircraft parts from the carbon fibers is a critical process, requiring freeing the site from dust and heat, and establishing a secured environment to

complete the manufacturing process.

We started with the manufacture of simple parts of aircraft, where half of the aircraft was of fabric. The pieces that were made in the Al Ain were taken to be installed in Boeing 777 and 787 Dreamliner in USA. We have built a factory in ten months, and formed a UAE team for manufacturing aircraft parts from fabric to be installed in Boeing 777 and 787. We do this exclusively, and no plant in the world can manufacture the same parts. We are not satisfied with simple and small parts, but we have developed the UAE potentials so that next year we will manufacture the aircraft's tail exclusively in Al Ain city.

A new phase of development has started, and then we moved to the Fourth Industrial Revolution stage. We had to develop ourselves, where the world was moving rapidly towards diverse innovations. There-







fore, we get involved with three-dimensional printing. UAE is the first GCC country that printed the first internal part of 777 aircraft for Etihad Airways last year. We continue to develop our competencies to use a three-dimensional printing for manufacturing aircraft parts. If half of the aircraft is made of fabric,

we must focus in the future on a three-dimensional printing.

We have a prominent factory in Al Ain «Strata», which works in the field of production of aircraft parts. UAE nationals constitute half of the labor force in the factory, with a very large presence of women in all stag-



es of work, whether operating management, parts fabrication, teamwork management or supervision of production lines. We always say, «If the heart integrates with mind, impossible becomes possible.» Initially, many companies questioned the ability of the UAE in manufacturing the aircraft parts. However, major companies, such as Airbus, focused on the idea of the development of UAE as it buys the largest number of aircrafts in the world. Statistics state that the UAE is the second largest market in purchasing Airbus aircrafts. Therefore, Airbus Company was keen to transfer knowledge to UAE so that it can someday manufacture aircraft parts.

There is another thing, namely social innovation, which comes from the lofty goal of the vision formulated by HH Sheikh Mohammed Bin Rashid Al Maktoum, UAE Vice President, Prime Minister and Ruler of Dubai «may Allah save him», on the service of humanity, where he spoke about the service of humanity through innovation and creativity, not money. In-

**Innovation and creativity  
will last in the future, as  
they represent something  
that builds knowledge, and  
what builds knowledge  
brings the wealth to future  
generations.**

novation and creativity will last in the future, as they represent something that builds knowledge, and what builds knowledge brings the wealth to future generations.

We are inspired by the vision of HH Sheikh Mohammed Bin Rashid Al Maktoum, UAE Vice President, Prime Minister and Ruler of Dubai «may Allah save him» and by what we have achieved in UAE, and our abilities to serve other countries. Knowledge is the only way to transfer efficiency to build economy and develop other communities. Sheikh Mohammed Bin Rashid Al Maktoum's initiative for global prosperity is global and seeks to solve problems existing in different parts of the world, through using innovation as a means to solve these problems. It also aims to foster the level of prosperity in these countries because they need help. By connecting minds all over the world via Internet, we are trying to find new solutions from around the world.

There are four challenges facing us, and we want to overcome them, namely sustainable cities, sustainable energy, the digital divide, rural transformation and the eradication of hunger. All human beings suffer from these challenges, which directly affect them. It is worth mentioning that UAE is not focusing only on solving local problems. However, UAE is keen also to resolve external problems, because helping others benefits us indirectly.





## Day 1

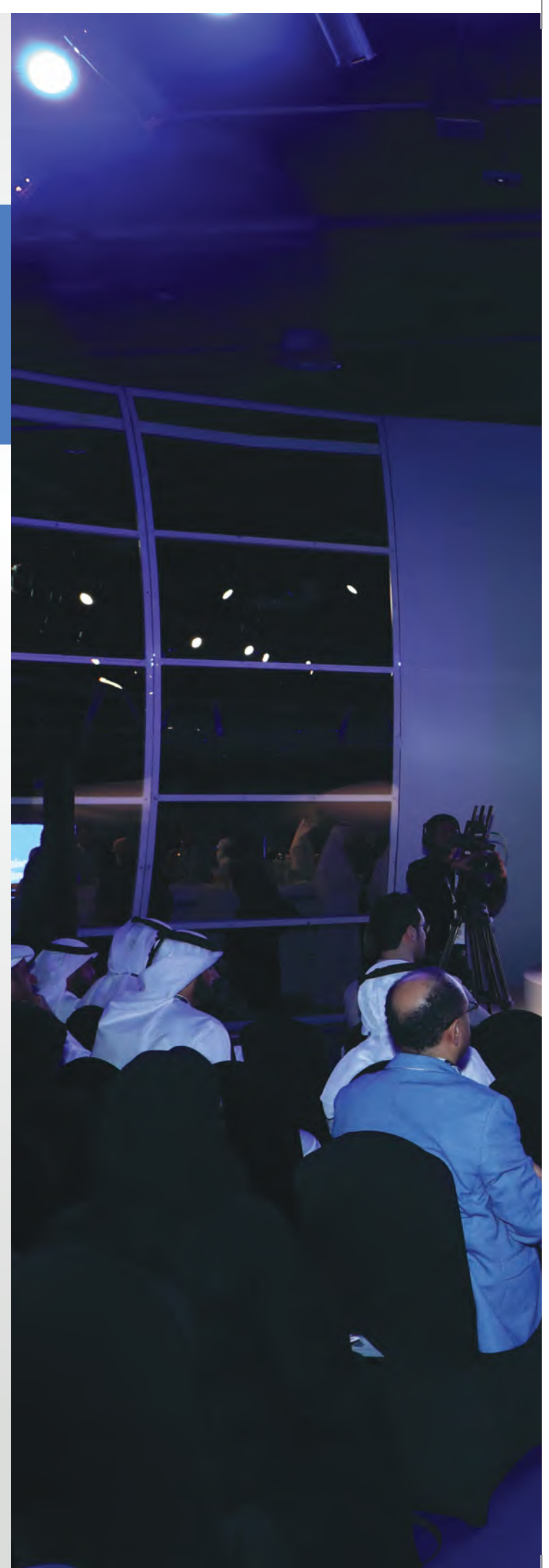
# Know Talks

### Session 2

## The Impact of Auto Industry on the UAE's Knowledge Economy

### Topics

- What is the role of youth in the knowledge economy?
- Does the industrial sector have an impact on economic development?
- Insights into the status of UAE's industrial sector.
- How does the automotive industry play a significant role in supporting the UAE's economic diversification?





وبتیه.. تال له کایه تال یسار قه دینه هیمه!

يُقال له يا تاليسا رقم

يَجْعَلُهَا نَاعًا لِّعَتَا رَجُلَيْنِ أُولَئِكَ تَالَيْسَ رَافِقَاتُ هَاطِلَاتٍ

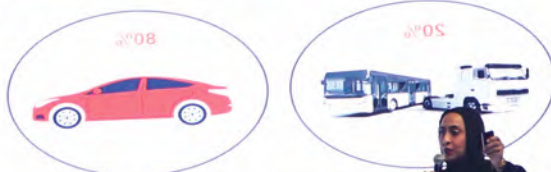
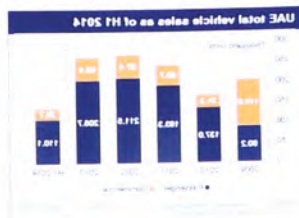
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تأليف: عتبات بنت الحارث

سفیالتہ رنڈل

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## Speaker

**Dr. Majida Al Azazi**

**CEO, Sandstorm Automotive Factory**

The first Emirati woman in the Middle East to hold Business PhD in Supply Chain Management and Manufacturing from UAE University. She opened a car factory in 2017 and became the first woman in the world to own such a factory. Dr. Al Azazi has held numerous positions in various sectors, both at government and semi government companies. She has a membership at the Abu Dhabi Business Women Council and the Emirates Volunteer Society.



Today, we will talk about three aspects: youth and the knowledge economy; the industry sector in UAE and the role of the industrial sector in economic development; and the importance of the automotive industry in UAE.

As for youth and the knowledge economy, we may ask ourselves about the original meaning of knowledge. Throughout the past years, investors were thinking of how to increase production and profit without thinking whether this product fits the market or not, or this product will add a qualitative addition to the community or not. Now in knowledge economy era, owners of companies should focus on creativity. For example, Australia directed all its resources to support small and medium enterprises; and even USA and Europe adopted the same approach. In 1989, USA and Europe focused on large government companies and other companies financially supported by the government. This concept has changed, and now they know that small businesses are already supporting the country economy. So you should think about the age of groups, not their levels, and say let the big companies grow more and more. We must support youth groups. How do we support young people? Young people have creativity, leadership, ability and innovation, and we have to take care of them, provide them with

the right conditions, and benefit from their ideas and knowledge, as they have the audacity and enthusiasm, which we do not have.

How do we take advantage of young people's enthusiasm? There are three ways to do that. First, direct ideas and motivate youth by learning from those who preceded us. Second, enhance capabilities. How can we enhance the youth's capabilities? By holding sessions like this one, then we should apply the recommendations.

The industrial sector in UAE has developed and reached 14% over the past ten years, and soon we will not depend anymore on oil sector. In my opinion, the industry is a fundamental part of our economy. However, without adopting knowledge economy, we will be left behind. Therefore, the technical competition, innovation and technology are fundamental parts for any project.

We export only 14% of non-oil exports, that is worth \$42 billion. We will not access the global competition without development, innovation and creativity in these areas.

As for industrial cities, we have many industrial cities, such as Al Ain Industrial City, Industrial City of Abu Dhabi, Khalifa Industrial City, Dubai Industrial City, Sharjah Industrial City and many others; and the infrastructure is very huge.

If we talk about logistics, we can say that we







are in a middle location, 4 hours from Europe, 8 hours from East Asia, and 2 hours from India. You have Dubai Ports World, Khalifa Port, Hamriyah Port, and a new port in Fujairah, which will be one of the most prominent ports.

### **The Industry Role in Economic Development**

No revolution occurred in the world without industry, starting with steam then electricity until we reached the Fourth Generation that mimics the human brain with the machine via electronic clouds, i.e. the internet cloud. What is the importance of industry? Industry is the main focus of creativity and innovation. In the automotive sector, they were making new models every five years, then every two years, and now every year. In the past, the making of a prototype re-

quired 3 to 6 months to see how to change the front or sides of the car! Now in just 48 hours, I can change the car completely, create a three-dimensional model and send it to the factory, without charge or for a very small amount; do you see how did technology develop us?

Industry generates more millions than trade, but it needs patience because an industrial project takes 3 to 5 years to generate its financial revenues. The industrial sector shares 70% of the savings. Germany was destroyed during WWII, and it depended on industry to rise again, as industry is the future.

As for the automotive sector, let us discuss the vision of the UAE government in 2020 and 2021. It is a vision that depends on a competitive knowledge economy based on innovation. In Ali Baba Company,



“ The UAE Market is the second most powerful automotive market in the GCC. ”

robots operate everything in stores, as robots receive and execute orders. Robots operate the manufacturing line, shipping lines and logistics completely. Through the smart factory, I can manage a complete plant through ERP electronic system. I do not need production or stores manager.

**Importance of the Auto Industry in the UAE**

The UAE Market is the second most powerful automotive market in the GCC, due to the oil costs decrease, and because we have many facilities from banks and insurance companies. It is easy today to buy a new car. It is expected that the number of cars that are being sold in the Gulf will be more than three million cars, so you shall start with the automotive industry sector. There is a study that confirms that the UAE market is one of the best attractive markets for the automotive sector by 100%. With regard to taxes, we have no customs taxes. There are countries such as Egypt and Jordan that apply a tax rate of 100%, which may reach 150% for importing a new car, but in the UAE, you only pay 5%.

**Imports**

The imports rates show that GCC countries are just consumers, as we represent 67.9% of car imports in the world, of which 70% is imported by KSA and UAE.

The automotive industry sector is not one factory, and I did not establish Sandstorm in vain, but to be a national plant that attracts investors. Therefore, after I attended two global conferences, I have the opportunity to be supported by 11 investors. The lesson here is to be a pioneer; that is the most important.

We can learn from the foregoing the importance of integrating the institutional and government efforts into the private sector to develop clear and integrated frameworks for building industrial base in line with the Fourth Industrial Revolution. We shall also continue to support the process of research and development, and modernize school curricula to reflect real life, qualify young people in the fields of industry, train students, open training and technology centers, and provide support for small businesses. Please remember that governments are now focusing on fast-changing small and medium enterprises. Thank you for listening.





## Day 1

# Know Talks

### Session 3

## Digital Darwinism

#### Topics

- What is digital disruption and what does this mean for companies?
- Technology: Why does technology produce a leapfrog effect, how does deployment of technology shift into the re-imagination of business models?
- What can companies do to understand future trends and act upon them?
- When is the right time to rethink technology in your business and what are the best ways to make use of the available solutions?



This is the power of "



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## Speaker

Tom Goodwin

EVP of Innovation at Zenith Media, USA

He was voted the top of «Voice in Marketing Globally» by LinkedIn. He is a graduate of both Architecture and Structural Engineering, Sheffield University.





I will speak a little about two terms: 1. Digital Transformation, 2. Digital Disturbance.

Now everyone is talking about these two terms, and I would like to explain my opinion about the meaning of both terms. To think about this matter, we will play a small game. If I ask you to imagine how does a very fast car look like and what is its manufacturing company? You may think of a list of classic automobile companies, such as «Porsche 918,» which was manufactured by a prominent company that was established decades ago. However, this car is very close to the ground, impracticable and its price is very expensive. However, Tesla is the fastest car according to the market tests. The company, which manufactures this car, has 10% of the experience of other automobile companies, and this car is affordable, practical and has become the fastest car very suddenly because the owners of this car updated its software. They worked on a car inside a garage, and in the next day, this car became the fastest one! This is a radical change in car industry, so we must ask ourselves, what is going on? This process, which led to manufacture «Tesla» is a good example for the new disturbance. Therefore, I will explain the origin of this theory, its subject and meaning.

I will speak about the concept of paradigm leap and the possibility of devising a completely new way to create products and services, and I will speak a little

about the power of the digital transformation. How can companies think of a technology that is fit for the present and the future.

It is common to talk about the accelerating rate of change, but from the present to the future most things will not change, and we have to be aware of the change that occurs. Therefore, I see that my task is to travel around the world, and try to understand what has changed and what has remained? There are kinds of people who would say, Oh, my God! Everything has become different! We shall eliminate everything that we learned before, and this process requires a lot of money! Others wish that the Internet had never been invented, so that they can continue their work as they used to do! The attempt to navigate between these two extreme directions and holding dialogues are very interesting. Therefore, I wrote to many publishers, who granted me an opportunity to make interesting discussions with clients: I work with a company called Publicis Media, helping customers to understand technology, and what it means for their businesses, and explain to them the practical steps for using technology. I wrote a book to discuss some of these topics.

As we indicated in the example of Tesla, how can creativity help us take huge steps towards the future! To recognize this, we need to understand how the design works, how to conduct the design pro-









cess, and the limitations required by design. What is happening is that there is a job that must be done, and whatever this job or the pre-starting instructions are, they are the inputs to the design process. There are standards we all follow over time, lead to revise and improve solutions, such as physical sciences, gravity or budget. The first portable audio recorder in the world allowed us to hear music anywhere. This device was a very revolutionary and expensive product and its battery did not last for long! The quality of the sound was bad and the device was heavy and big, but it was the best Walkman in the world. Then we knew that it was not the best when a better device was released. Therefore, people worked slowly on challenging the design and realized that they had to follow the «cassettes» form and find a motor that does not consume much energy, and ways to improve sound quality. Therefore, they invented Dolby B, then Dolby C, and no one has known what that was! However, we know that this is what made it the best, and the device became cheaper and thinner, and over time has become much better. Perhaps after ten years you can buy something more developed, thinner and smart. It was the best Walkman ever. It was cheap and thin, and the sound quality was good. This device was integrated with a radio. You were able to rewind parts of the audio and speed it without ejecting the tape or using a pencil.

This was the best-known Walkman in the world at all, and when it was released, we witnessed the first CD player, which was the first portable CD player in the world, but it is still the best cassette player. Then engineers faced different problems, and they wanted to understand lasers, digital technology, how to store music, and shock-resistant. At that moment, all experiences that we had to solve the problems of Walkman suddenly became useless! Our information on «Dolby B and C» has become useless! That is what I call paradigm leap, and this is what happens when people change their assumptions about the form of solutions. The experiences and solutions became pointless.

We see this pattern everywhere, for example in music, where there was a smooth evolution and then suddenly this field witnessed a huge leap for the portable CD player, then the first MP3 player was released. At that point, engineers were in need of understanding two different user interfaces and storage in the hard drive. Therefore, the knowledge, which the people who made the portable CD player had, has become useless, too! This process will continue to occur, and this is the paradigm leap, which we are witnessing in everything around us; solar watches, mechanical watches, LCD watches, metal coins, paper currency, credit cards, and digital money transfer. Now, we have new solutions trying to





replace real money or virtual money. You will find that some of these models exist at the same time; we live in a world of credit cards, Apple Pay and digital currencies such as bitcoin.

When you focus on one of the best products, you will notice that this product is one of the first products that are manufactured within this new paradigm. People, who earn tons of money and change our thinking about categories, are the same people who developed the first solution! I was working with Nokia when the first iPhone was released. We had many research groups that told us they did not want phones with touch screen, because those screens would be broken, and very heavy, and there would be fingerprints on the screen. Then, Apple phone was released, and because they did not really know what they are doing, they made something much better than anyone who preceded them in that industry. They have become the first company that is worth trillions of dollars. We have to look at success stories, like Uber, Netflix and Red Bull, and think about them! Have they succeeded despite the lack of experience because they were lucky? Have they got a big imagination and a little bit foolishness? Or they have become more experienced due to this lack of experience! I think the latter is the right answer. I think the biggest risk facing companies is their belief that what they are doing is enough in a rapidly changing

“**If you look at the aspects of our lives, you will find that we added technology as a class of what we were doing before.**”

world, meanwhile other companies are trying hard to outperform them and solve the problem by a fundamentally different way!

In the second part, we shall focus on the power of digital transformation. We think that the world is changing while we are tending to pass all examples of how we do things through a new digital frame. Because if we look at an electronic newspaper page on the Internet, we will find that it is similar to the form of paper journal! The ads did not differ much since the nineteenth century until today! We transform our assumption to digital format, and when we look at the future, we assure that the virtual reality is not how to put glasses in a shopping mall virtually, but how to build virtual shopping malls. The shape of self-driving cars is like ordinary cars, but why do we assume that their shapes must be like ordinary cars? Why cannot its speed be 25 miles per hour? Why is there a space for only one person? Why can't we choose from many car fleets, wheth-





er we prefer a small bus when traveling with our families on a vacation, or a small capsule to go to the grocery store? We are building on old slogans and activities of old shops, such as Instacart, an application of a mobile phone worth billions of dollars. What is happening is that sellers are renting properties, then they furnish, lighten and hire staff to put goods on the shelves, and more staff to take these goods, put them in shopping baskets and deliver the baskets to the houses. This is a little clumsy way to think of a business. It is all about building this digital layer on illogical processes. I think we live in an era where technology tends to have 3 stages: first there was pre-technology when life was logical and comfortable, then comes the technology stage, where we can access technology and everything has become complicated and messy. People make stupid mistakes, companies go bankrupt and no one understands what this means! We tend to add them to the existing methods of doing things because we know that these things work this way. Then there is the post-technology stage, where we understand the behavior of changing technology, how technology changes our expectations, and how business models and economies have changed. In this stage, people are thinking of what is possible, and re-thinking of this business from scratch. This is done with every form of deep technology, when

you read about the power of steam, when they made very strong steam engines and during the first use of steam engines to carry water for the operation of water wheels; because that was the way to run factories. It took many years until someone looks at the steam engines and says why should we not replace the steam engines with water wheels?

There is an interesting way when you think about this, because all these eras have become logical when you think only in the past. I think we are in the middle of the Internet technology phase, if you look at the aspects of our lives, you will find that we added technology as a class of what we were doing before. I do not know the sector you work in, but it is wonderful to think that if your company will prosper in 2025, what would you do? What will be your company's roles in the lives of people? Is it possible to do something radically different, if you understand people's expectations and behaviors? Which thing can be possible by technology? You can rethink of your business radically. Therefore, my last annoying question is: The next time you look from the window of Uber car or aircraft, if you know everything about the people, technology and business, how does your work look like? Because I am sure that your work will change, and then the question will be «how did we reach this status? This is a very difficult question.





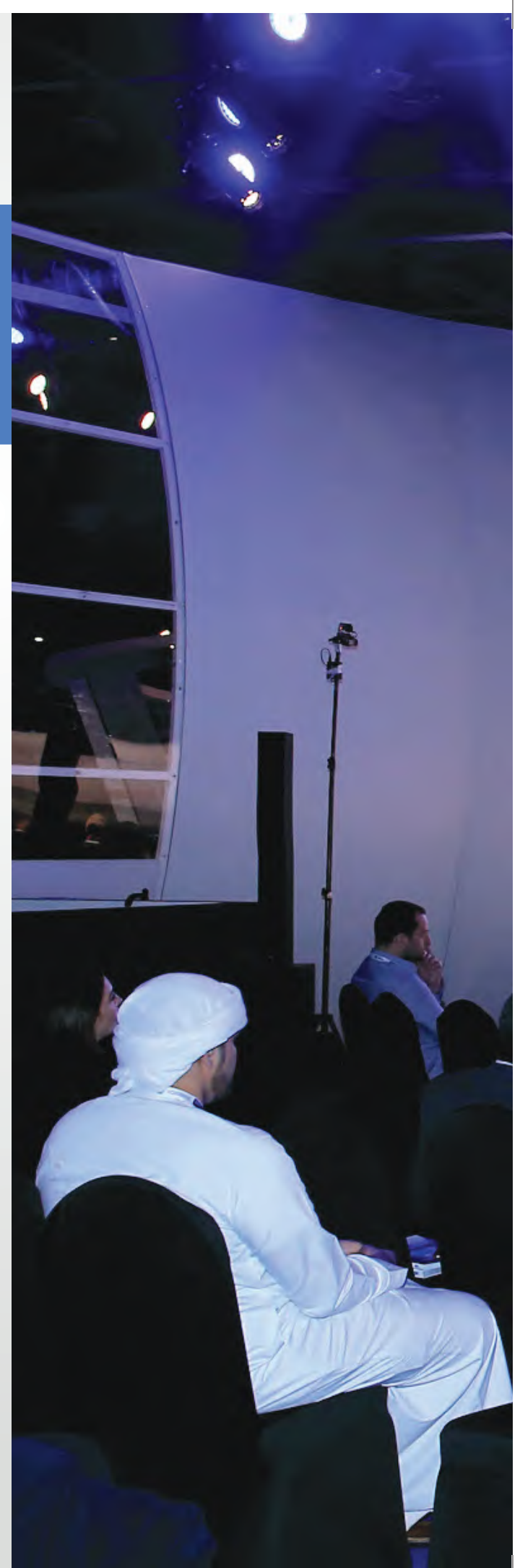
## Day 1 Know Talks

### Session 4

## A New Social System for a Technological Age

### Topics

- Methodologies for harnessing the potential that science and technology could provide for bringing positive change to our social system.
- An emergent social system based on the latest social innovations.
- How we can engineer technology and cybernetics into a workable and human synergy for the people of all nations?





**RESOURCE BASED ECONOMY**  
A NEW VISION FOR HUMANITY



**THE VENUS PROJECT**  
BEYOND POLITICS POVERTY AND WAR



**#HowTalks**





## Speaker

**Mrs. Roxanne Meadows**

**The Venus Project Manager**

For 41 years, Roxanne has worked with renowned futurist Jacque Fresco to develop and promote the Venus Project and the NPO called Resource Based Economy. Roxanne and her work on the Venus Project have been featured on radio, television, and documentaries. She has presented at conferences to over 27 countries around the world.



Hello! I am about to talk about something new called «Venus Project, and Resource-based Economy». The Venus Project is a comprehensive social-economic system unlike the previous ones. It is not a communist, socialist, fascist or capitalist system, but it has the capacity to address most of our problems at its roots. The founder of this organization is Jacque Fresco, who worked in the field of car organization and in many different fields such as aircraft design and the manufacture of hundreds of medical devices, cars, boats and trains, even the automotive industry and the development of systems for entire cities, but he is mostly famous for the design of Resource-based Economy, which we are going to address later. At the Venus Project, we feel that this scientific approach is the most reliable approach. However, the way we manage society has nothing to do with the scientific process. When it comes to manage our society, we will not depend on science. Then, how can we design a society without wars, poverty, famine or homelessness? How can we achieve a sustainable future if we continue to use outdated methods to build the society? Today, our problems are essentially technical ones, however the commercial activities, banking, laws, politics and military systems have precedence over technologies that can give us clean sources of energy, safe transportation, safe homes and other infrastructure that can give us a high standard of

living for everyone on our planet. Therefore, Venus Project wants to apply science to the social system to improve people's conditions, and to make decisions based on statistical data and smart management of our resources.

Jeremy Rifkin wrote his book «End of Work», explaining how technology quickly laid off many people from their jobs, while they do not have the ability to buy goods! In America for example, from 2000 to 2016 more than 4 million people lost their jobs in the manufacturing sector alone. I can understand why people fear technology! Because they think it often means monitoring and laying off people from their jobs. I am sure we all know now that the problem does not lie in technology, but in the misuse of it. The Venus Project assumes that if we are to survive the enormous global challenges we face, we eventually have to realize that all the resources of earth are a common heritage of all people in the world. We advocate the loss of employment of science and technology in the social system for the benefit of nations and the protection of the environment. In order to achieve this, we have to modernize the way society operates and how to make goods and services available to all for free and in equal measure. Many people say that this is impossible, because humanity cannot go beyond its destructive nature. This is a myth because we were not born with greed, fanaticism and hatred but we ac-



“**The goal behind the Venus project is to maximize the quality of life for all rather than maximize profits.**”

quired those qualities.

There are many interactive variables that affect us, such as the books we read, the films we watch, the Internet we browse, our friends, our teachers, and our families or the religion and subcultures where we were raised.

Each decision you make is based on your background. I know that some of you think about the «genes», which affect the shape of the body, the hair color, the eyes and the skin, but the genes do not give us a system of values. They do not give us a way to determine what is important and what is not; this comes only from experience. All our ideas - whether good or bad, true or false, what is common and what is moral, and even the sense of beauty - come from our culture.

Money is not the target of people, but they want to get goods and services that money brings. Our practice of rationing resources through monetary methods causes terrible suffering and environmental degradation all over the world. We plunder the resources of earth and poison the air, food, water, and even ourselves for profit.

The Venus Project calls for the creation of an asso-

ciation of engineers to create abundance as soon as possible. We can access the system envisioned by Jacque Fresco as a resource-based economy, where goods and services are available to all without money, slavery, credit balance, or debt of any kind.

The goal behind the Venus project is to maximize the quality of life for all rather than maximize profits. Rather than maximizing profits, the priorities of the Venus Project go to food, housing, clothing, and high standard of living for all people living on the planet as soon as possible. To achieve this, entire city systems will be built so that we can conserve resources and use energy efficiently.

If new cities are built from the beginning to the end, and the ancient cities have been renewed and developed, this is thought to be less costly in terms of energy consumption. We will make one model for people and then repeat it. I do not mean that each city is a duplicate of the other, but each one is unique according to its function and location. There will be more beautiful gardens, beautiful parking spaces, and will use the best clean technology to fit into nature.

All outcomes benefit the society at no cost. The standard of living will rise significantly. Everyone will be able to reach his needs. We demand social goals in a unified planet that works for the welfare of all people and for the protection of the environment.

Many people find this questionable issue. I would





like to take a few minutes to talk about what we are working on. The center is made up of 21 acres in Venus - Florida, we have built 10 buildings, and we have more than 400 models of future plans. We have produced many drawings and charts, and we literally have more than 5500 drawings invented by Jacque Fresco.

Our motivation is that we have individuals who believe in this project from all over the world and they are increasing daily. Our organization is a non-profit organization. We welcome participation, and I look forward to seeing how we can cooperate here to start a safe and prosperous future for all human beings.



## Day 1

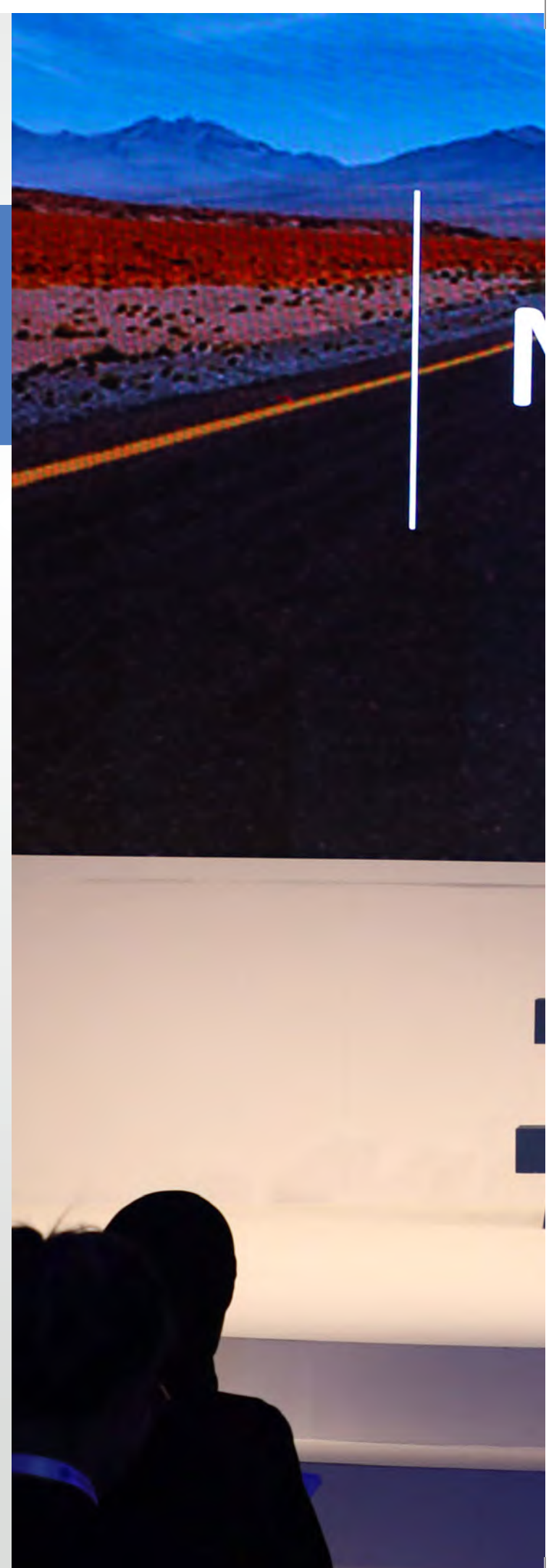
# Know Talks

### Session 5

## Redefining Entrepreneurship

#### Topics

- My story: Switching from a «hobby» to a «career».
- Insights of being a young entrepreneur: advantages and disadvantages.
- How governments, organizations and individuals can support young leaders and trailblazers?





My Story.

#know  
#talks







## Speaker

Mr. Jordan Casey

**One of the world's youngest serial entrepreneurs**

An 18-year-old Irish entrepreneur, and a BAFTA-nominated; he founded a project called «Teenage Entrepreneur Movement». He has earned the award of Best Innovation at the Student Enterprise Awards Junior Technology as well as clinching first place at the BT Young Scientist and Technology Exhibition.



I am Jordan Casey. Today we are talking about the redefinition of entrepreneurship. I will tell you a little bit about my story, as a young entrepreneur, and I will tell you how I can educate the next generation of young entrepreneurs like me.

I am 19 years old from Waterford, a small town in Southern Ireland. I am a self-taught programmer, I taught myself. At the age of nine, I was curious about computer operations and systems. I taught myself the web design through YouTube, videos, and different books. After a while, I had my own website. Three years after the setting up of my website, I decided to go through a new challenge. I started to discover the iPhone development kit, a platform used to create applications for Apple platforms that need a Mac for operation, which is very expensive. I asked my parents for help and they were skeptical, but fortunately, they bought me the computer. I began developing this game on the «Mac». My first game was very simple, but it gave me enthusiasm, and showed me that my hobby could become my career. I have founded a company and renamed it «Casey Games». At the age of 12, we developed applications that are being sold all over the world and I managed to create a platform for myself through computer games. I started to set up another technology company to manage educational systems for teachers, because I wanted to solve the problem of using technology in education.

In 2015, I started a program called «KidsCode» that combined games and education with an online platform where children can communicate. At the same time, I learned programming and established a number of different companies. Furthermore, at this time I became very enthusiastic about things like education and encouraging entrepreneurship for young people. I have tried to be a good example for young entrepreneurs.

At the age of nineteen, I was able to say that I had been working in the industry for a decade. Ten years later, when I became twenty-nine, I would say I had 20 years of experience in this field. I was very lucky to know what I want to do, I love what I do, and I face no major obstacle. Besides, I took the lead compared to those who start their work after graduation at university.

There is no doubt that I have encountered some difficulties, such as managing my time between work and education, my work being taken seriously, and finding investment, teachers or platforms. It is known that children lack the mentality to manage things or they just play around! I think it is important to change this mentality. I think things started to change, and people began to be convinced of the abilities of young people and teenagers. Therefore, I think the solution for speeding up the process is my current movement «Tem», Teenage Entrepre-



neur Movement. It is a global network of teenage entrepreneurs from all over the world, who can help, trust, and support each other.

Let's talk about my vision. We surely need to benefit from the youth of today. I think there are a number of different ways for the government to support what they want; such as real funding, initiatives, programs, grants and competition for young people. Even initiatives and movements can give people a platform, because the government has a huge platform capable of empowering young people, with a huge part of the responsibility for education, for education is the backbone of empowering young creators. We must take care of learning-based programs, encourage teamwork and cooperation, and highlight the characteristics and skills of entrepreneurs.

We should also work with a new system in which education is reciprocal; teachers benefit from students and students benefit from teachers. I believe that if we can encourage the use of more technology and embrace the power of technology, we can learn more and more quickly. In addition, I think that the private sector plays an important role in providing support, due to its funding capability.

I want to establish a movement so we can support each other, to show the world how young people are strong; by giving them opportunities, giving them space to express their opinions, engaging them in pol-

**Entrepreneurs are those who make money, but they also solve the problems, and they have the mentality of the real initiative, to take advantage of themselves, to benefit the entire wider society, and solve issues and problems through their ideas and innovations.**



icy development, and benefiting from their own point of views, ideas and other thoughts. The overall goal is to take care of the next generation, so the theme of the session is to redefine entrepreneurship. Who are the entrepreneurs? Entrepreneurs are those who make money, but they also solve the problems, and they have the mentality of the real initiative, to take advantage of themselves, to benefit the entire wider society, and solve issues and problems through their ideas and innovations. I think we encourage this as the true definition of entrepreneurship, to open the way for more young people, who may fear entrepreneurship, because they have another vision for entrepreneurs.

We can have an open meeting with young people, who want to become entrepreneurs, who share our vision, and who want to nurture the next generation of young people around the world. This is an attempt





to develop and look for entrepreneurs and ambassadors who feel that they can share with the youth their ideas about their experiences, and can benefit and help them grow. We are looking for young people and we can hire consultants, so we want to build an initiative for children by children. We need to engage young people, share their ideas, and see what they can offer to help.

We have teams from all over the world in Ireland, Africa, Mozambique, the United States and India. Moreover, I think it is important to be here in Dubai, in the United Arab Emirates, and in the entire Middle East.

There is a great possibility of making a movement here because of the smart innovation. I have met a distinguished group of young people with several amazing visions and ideas, which I think will contribute to shaping the future of this country. The government here is interested in opinions and believes in young people and believes they are the driving force behind this full vision 2021.

You cannot succeed without the cooperation of people around you. Young people have to benefit from the digital world in which we live and from the Internet too, as it is the most powerful tool in the world.







## Day 1 Know Talks

### Session 6

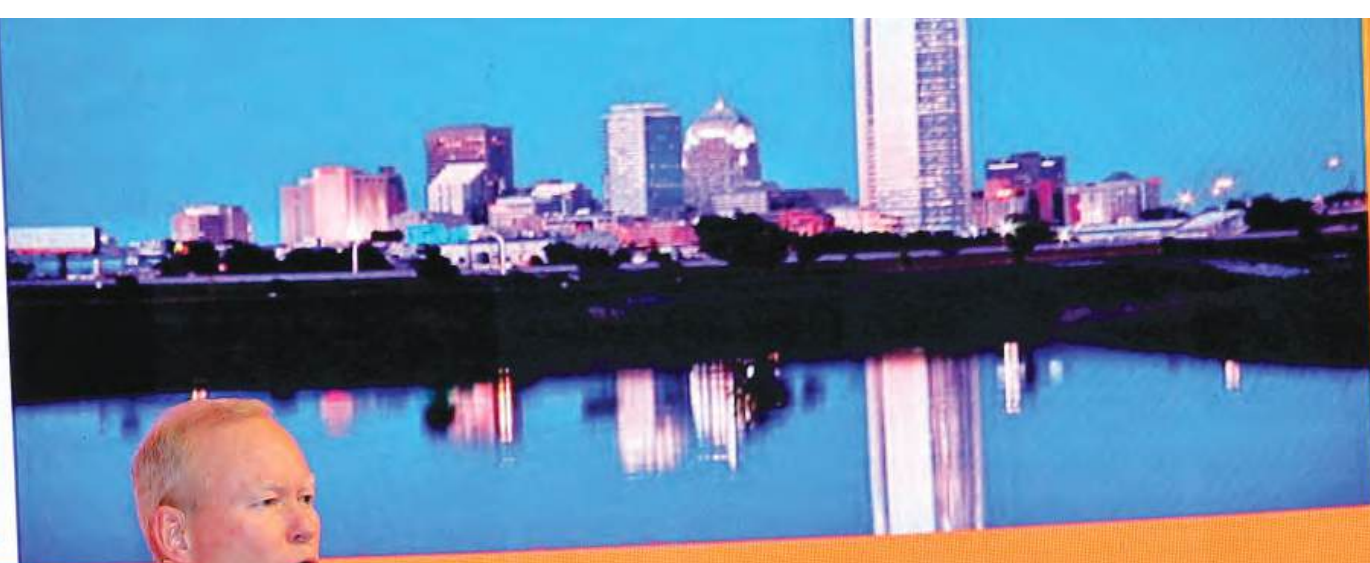
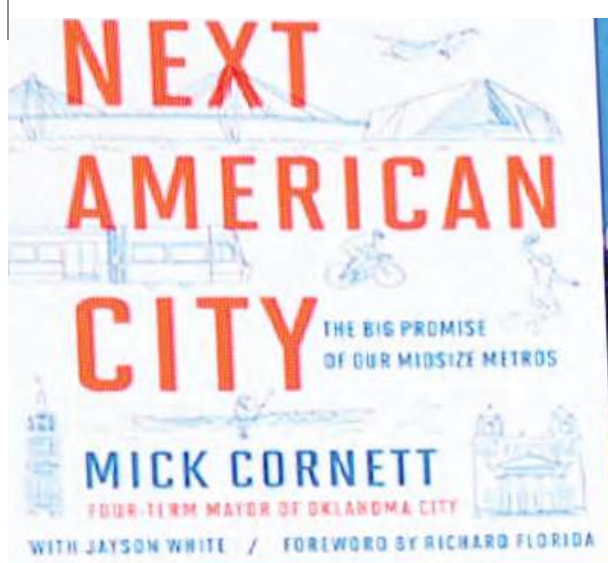
## Building Cities around a Knowledge Economy

### Topics

- Creating a City Where People Want to Live.
- Importance of Social Connections.
- Avoiding the Growing Pains.
- Technology, Technology and more Technology.





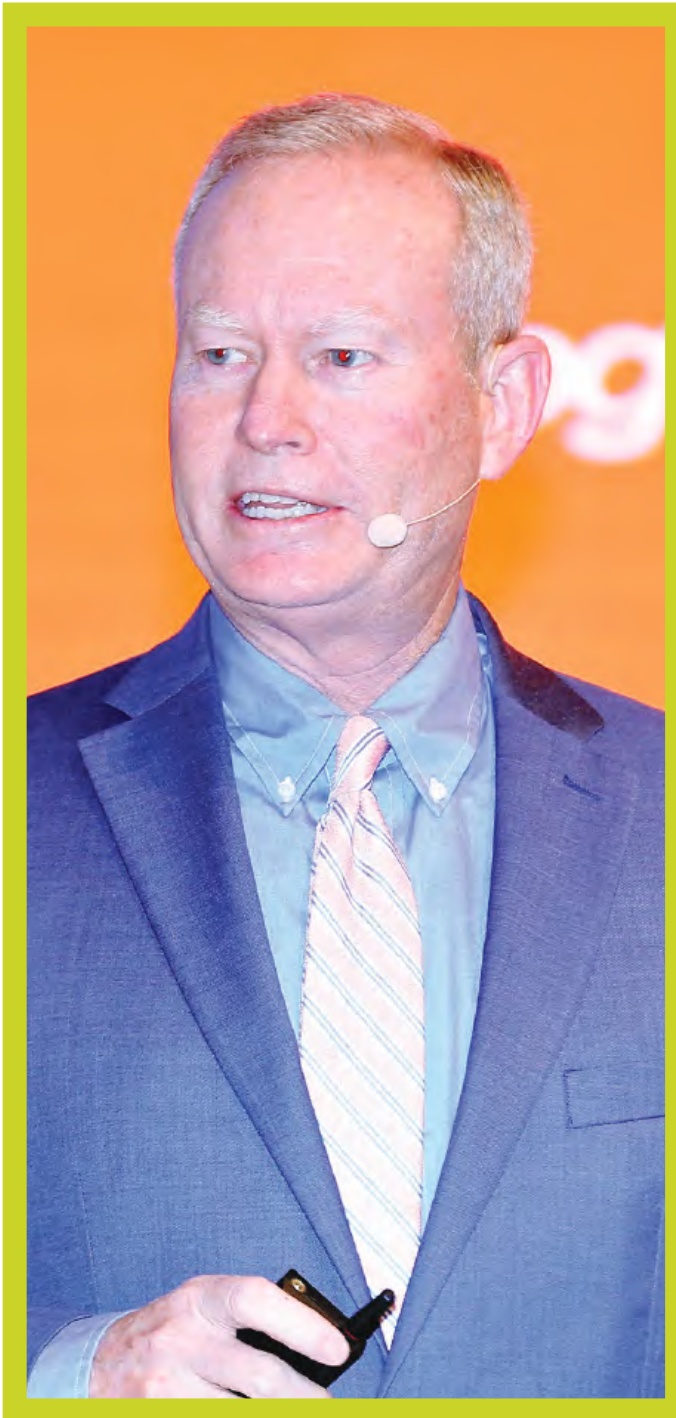


@mickcornett Oklahoma City, OK  
extamerica.com

now  
links







## Speaker

**Mr. Mick Cornett**

**Mayor of Oklahoma**

He is the first mayor in the history of Oklahoma City to be elected to four terms. Mick also serves as President of The United States Conference of Mayors. He served as National President of the Republican Mayors and Local Officials (RMLO). He also served as Chairman of the US Conference of Mayors Urban Economic Affairs Committee until 2007.



There is no American city that is developing rapidly like Oklahoma City; however, we still have a long way to go. If we go back, for example, to 1990, we find that Oklahoma City was a victim to the problems that faced the city for decades. The heart of the city was choking, and people began to migrate towards the suburbs. Oklahoma City at that time was an example of the American traditional cities. The mayor then was very brilliant and was learning through the hard way. He spent one year of his term and a lot of money in an attempt to reduce the area of a big airline company, and to build a maintenance facility for the city. This project revenue could add \$1 billion to the annual economic income of the city. This was the inspiration, which we needed to rebuild the economy.

Eventually, the airline company told the mayor that they did not choose Oklahoma City for building the maintenance facility due to the bad quality of life in the city, even they could never imagine that their staff could live in this horrible place.

However, there was a new paradigm of transformation; when the Mayor began to invest in the center of the city, by building centers for arts, improving old facilities, and building new facilities, libraries, and sports arenas. Moreover, we put water in the river, where we had a great ditch without water, accordingly

we built dams and put water in the river.

The next mayor came and invested in education, so we built or rebuilt 75 schools. In 2004, I was elected as a mayor, and served for 14 years. I felt it was important to improve Oklahoma City by increasing awareness; therefore, I began a public discussion about obesity and some health issues that have plagued Oklahoma City. For 30 years, we paid attention to material needs in the city center and took care of the basketball team to bring more cultural engagements. We have our health care system. Now, highly educated people began to come to Oklahoma from all over the world.

This is the core of my new book *The Next American City*. It does not talk only about Oklahoma, it talks also about this ideal shift. We all live in cities we did not build, but we inherited from previous generations. What kind of cities do we want to establish? Future Citizens will ask for more than homes. What can we do today to build cities that offer the fastest possible way to build wealth and change? Surely, we can embrace change; however, as mayor of a big city for 14 years, I tell you: People do not adopt change! I divide people into three groups, the first group tells you that they do not like change, and when you change something you discover they were right. You find them angry and they want to know the reason for the change. The



“ We encourage seniors to continue their education, as the most successful cities are those cities that adopt the culture of training and lifelong learning. ”

second group - a complicated one - tells you that they love change and when you change something they discover that they were wrong. You find them angry, and that they did not want the change. Moreover, the third group tells you that they want and like the change, but this group became extinct.

The only thing for which societies are competing is talent. We want to take advantage of these young people at the age of twenty. Conflicts in the past were for political domination, strong defenses, and the largest machines, but cities today are successful in attracting talented people to live, work and play. The sole competition domain between communities is talent today, but all these people can be linked, and this linkage comes from mobile devices that are connected constantly. It is not enough for us to be connected with people who we know in Twitter, Facebook and other platforms, but also we shall communicate with people who we do not know.

The most important work that leaders can seek to

do is connecting talented people. Connecting people together in a talented global marketplace builds a strong community and deepens relationships all over the world even if you have not gone before to a major global city. If you know people better, and people are in contact with their friends and relatives via social media in one way or another, this communication will be of great value.

We encourage seniors to continue their education, as the most successful cities are those cities that adopt the culture of training and lifelong learning.

In fact, nothing changes our cities more than technology, which reshapes the world economy internally. However, it seems that the cities, which have shown the most progress in technology filed, have failed to plan their achievements; because many of our initiatives are subject to an open vote, at least at the local government level. You find that people do not want to address the problem until problems have been handled completely! Then problems become emergencies, and take longer time to be solved! Without focus strategy, cities will lose the competitive advantage in favor of new places.

Moreover, there is a question about the price of this technology. For example, if you present a proposed change at a group of people, who is more likely to ac-





cept the new idea: Youth or seniors? The answer is youth; because they know that something different will occur. However, if you look at votes, do voters represent the youth or seniors? There is no doubt that they are seniors. I always say that seniors have to sacrifice to build cities for the benefit of young people. Where are we now? Aspirations of young people at the age of twenty are not different from the aspirations of previous generations. Youth are still looking for hope,

a chance and the dream of having a private home, or work, and they only want a chance to stay because of their merits.

On one hand, I think it is good for young people to be entrepreneurs. Now, we have entrepreneurs, who evolve every day, and young people are trained in schools to become entrepreneurs. On other hand, cities have to be smarter through investing in youth and talent.





# Combined Flash-up



Ability to see connections between  
ideas, and concepts is a co

#know  
#talks







## Day 1

# Know Talks

### Session 7

## Moving from Consumers to Producers of Knowledge

### Topics

- Content is free, production of knowledge is at an all-time high.
- How can schools engage students in meaningful projects that focus on creativity and apply the content students are learning?
- How to move schools, classrooms, and students from consumers to producers of knowledge?





## Speaker

**Mr. Jeff Utecht**

**Founder & CEO at Eduro Learning**

He has taught at International Schools in the Middle East and Asia. He has worked with politicians in Washington DC and participated in The Educational Project at the invitation of the Prince of Bahrain. He co-founded the Certificate of Educational Technology and Information Literacy program (coetail.com) in 2010.



In this session, I will speak about new knowledge skill. Together, we will redefine the term of knowledge, as well as talk about the knowledge economy. The idea of knowledge has changed. In the past, knowledge was represented in how much information we could obtain, recognize and memorize. Now, this idea has changed completely in the era of knowledge economy. Knowledge economy about which we are talking is connected to the speed of learning, the ability to brainstorm, and quick re-learning.

First, we will talk about the generation that we will deal with, the next generation of millennials, i.e. children who are in school now. We must be aware of several things. First, they learn from the media, because they watch videos and interact with pictures more than text. It is a generation which focuses on media, and the community does the same thing.

We have to recognize the nature of today's children and society. Everyone - or at least the majority - has smart phones in their pockets constantly. Nowadays, we are consumers and producers or the so-called (prosumer). We can consume and produce the content at the same time on Instagram or Twitter, and that is exactly what children do. They can consume and produce knowledge at the same time, and this - no doubt - will lead to a massive transfor-

mation in the education system.

The education system is based on learning all available things, and use them when necessary, or what is sometimes called Proactive Learning. However, YouTube videos and other influences created a new pattern that can transform the educational system through the concept of Just-in-time teaching, or what is called in the moment teaching; the knowledge of information upon request. Now, knowledge is not measured by the information you know and can use when you need, but by the knowledge that you are trying to find and recognize if you need or when you face a particular position.

The education system that is based on knowing the information in anticipation of a request for it - which is prevalent these days - is based on memorizing. However, how can we make our children memorize information they can search for and acquire in seconds by using smartphones? How can we focus on what we call the hard facts and teach our children that nothing changes, and the facts are changing?

We need a system that gives students the opportunity to link sub-ideas and information they get from different places with each other and produce from that mix new knowledge.

Another thing we should focus on is that your ability to learn is more important than the information you know, because the information you know today may





become outdated or irrelevant in the future.

One of the distinctive factors of in-the-moment teaching is focusing on recognition of links between fields, ideas and concepts as a basic skill. For example, applying what I studied in math on what I am studying in science, and applying what I studied in science on YouTube content industry. It is a relationship like linear thinking and link between various fields on a linear level.

Furthermore, we have to focus on the innovative thinking pattern, where failure is not the opposite of success - as in other educational systems - but in innovation world and in light of knowledge econ-

omy, failure is all stages that eventually lead to success. Moreover, the opposite of success is fear, not starting at all, and staying where you are without undertaking an initiative.

In addition, an important point is what is the (Bloom's Taxonomy) for Educational Objectives. The idea lies in which stage of cognitive understanding of the brain has a better cognitive ability. If we look at the abilities to memorize and understand information, we will find it at the bottom of the pyramid of Bloom's Taxonomy. In addition, what we have to focus on is how to use the information to create, assess and analyze the knowledge.





“ Failure is all the steps that precede achieving success. ”

Furthermore, changing the method of work in the classroom through promoting discovery. If we buy a new phone, we may love to follow instructions in the manual gradually, but all that is required for children is giving them the phone and they will interact and discover it themselves. Classrooms have to focus on the so-called discovery chaos. In addition, we as teachers should help them by clarifying the procedures and steps they need to recognize their findings through the discovery chaos.

If we want education to be centered on the discovery chaos, we will need high-level constructivist classrooms. The idea is that constructivist-learning environments stimulate creativity. For example, I could plan my classroom and equipment in a completely confusing and chaotic way, to be messy and noisy, and the student will be out of their seats, this is a chaos. This process involves some gains, as students begin to organize their special educational experience. Furthermore, here lies the idea of Life-long learning and the idea of being in a chaotic environment where you set procedures and steps that allow you to achieve maximum benefit from this en-

vironment. This is the mentality of creative thinking and the idea of knowledge economy.

There are many examples that refer to the possibility of consuming and producing the knowledge content at the same time, such as «Wikipedia», even children can modify the content on Wikipedia. Imagine that the largest knowledge man-made encyclopedia, young students can edit and add content to it. Moreover, the Wiki books project, which provides free books for all. For example, if a chapter in algebra is not available in one of the books, a student can write it and produce added knowledge to the world. This falls within what we call the creation or production of content.

Briefly, I will talk about points related to the re-imagining of the educational system in the light of the knowledge economy. First, the rapid transformation from the system, which is based on knowing the information in anticipation of a request of it to the Just-in-time teaching system that is the knowledge of information upon request. Secondly, we have to recognize that failure is a part of success. We have to instill in our children that failure is all the steps that precede achieving success. The last point is that we have to shift from the idea that students should stay in school as consumers of knowledge to become (prosumer) of knowledge, thanks to the availability of tools that allow them to do so.





## Day 1

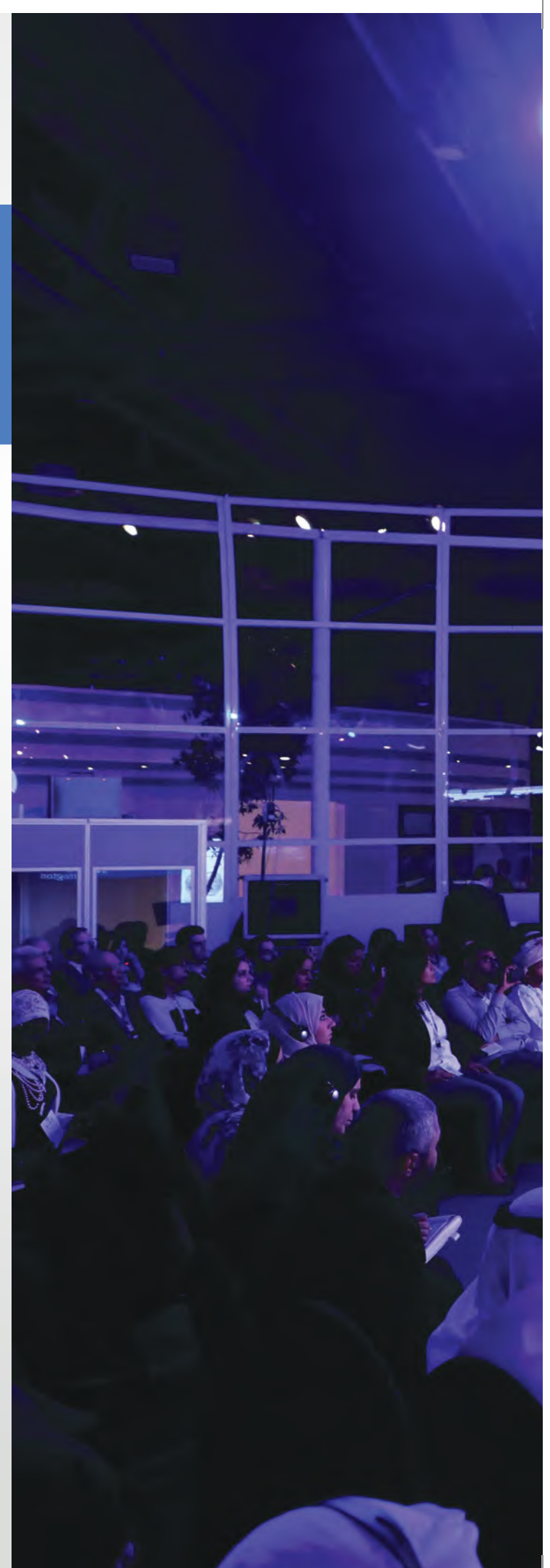
# Know Talks

### Session 8

## Success in the Knowledge and Digital Age

#### Topics

- Digital Evolution and how it is leading to lucrative opportunities.
- Valuable skills for building a dream team.
- Using influencers and social media to build your business and brand.





# Create Content

- Radio interviews
- Local TV interviews
- Newspapers, magazines, trade journals
- Speak at Chambers of commerce and Trade Shows
- Create meetup groups and networking events

## RAISE YOUR PROFILE Develop Yourself as an Authority

- Create Charitable fundraisers
- Live podcasts and webinars
- "Interview the Expert"
- Join targeted groups on LinkedIn
- Create a Digital Magazine

KH Kevin  
Harrington

#know  
#talks

Create Content





## Speaker

**Mr. Kevin Harrington**

**Entrepreneur, Co-founder  
of the Entrepreneur's Organization**

An original «Shark» on the hit show «Shark Tank». The creator of the infomercial, a pioneer of the «As Seen On TV» brand, and a co-founder of the Entrepreneur's Organization. He founded a company called «Quantum International». He became the president of «National Media».



Today, we will talk about knowledge economy and its role in bringing a radical change in the course of my career as an entrepreneur, and how this helped me to overcome difficulties and challenges, which I faced. I started my career with my father in his own restaurants. He helped me to engage in the entrepreneurship since a young age. I have already succeeded in establishing several successful businesses. I launched the idea of «The Entrepreneurship Center» and established the first entrepreneurship center in 1980 for entrepreneurs, the owners of commercial institutions and small business to establish their new companies. We established 30 business centers all over the USA, which helped me know and enter the TV industry. While I was watching TV at the beginning of the eighties, I noticed that the Discovery Channel was broadcasting for about 18 hours only! I thought to take advantage of this opportunity -from the mentality of entrepreneurship, which adopts initiatives and seeks to innovate- to broadcast advertising content during the broadcast stop (which lasts for 6 hours) for a profit share to the channel. As a result of the resounding success of my idea, Mark Burnett chose me to present the new competition program then «Shark Tank».

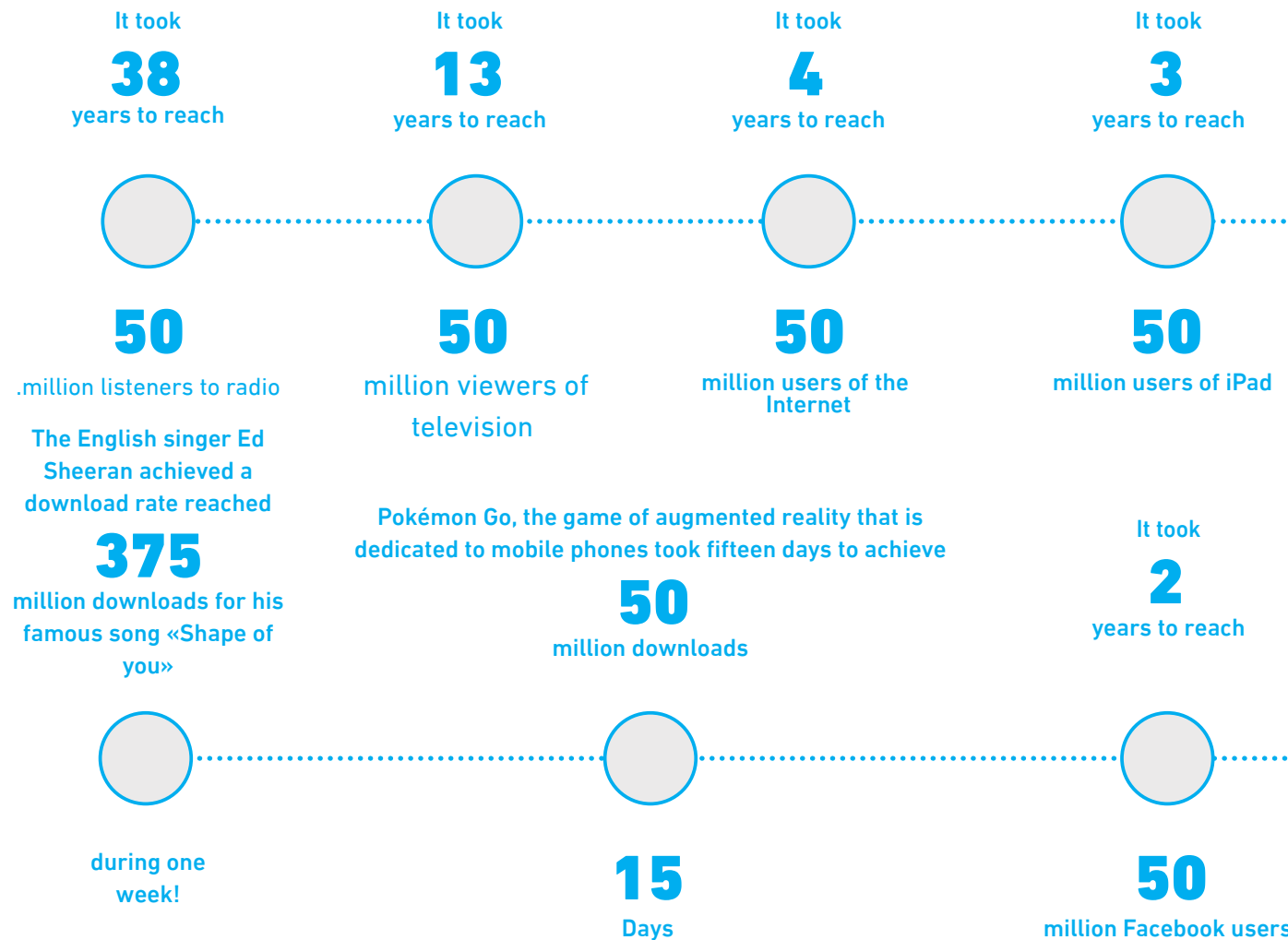
All entrepreneurs realize the unsettled and changing nature of the entrepreneurship world, and the swing between achieving profits and incurring losses. When

**All entrepreneurs realize the  
unsettled and changing nature  
of the entrepreneurship world,  
and the swing between achieving  
profits and incurring losses.**

the rates of television views and distribution of newspapers and magazines began to decline, my friend Tony Robbins advised me saying, «If you continue doing what you used to do, you will get the same results». I requested the assistance of Richard Branson, the leading prominent entrepreneur and the founder and chairman of Virgin Group, and the work plan that we set together to overcome these difficulties included three steps:

1. Building a new «Dream Team» armed with digital knowledge. The new team included experts, consultants, guides, technical specialists, celebrities, social media influencers and specialists in digital advertising to identify the reason of this phenomenon and to answer the following key question: What are those people, who desisted from watching TV, watching right now? The audience replaced TV with social media platforms in the new age of knowledge and digital development.
2. This new digital era is built in the context of knowledge economy and the disruptive digital innovations are built.





For example, the well-known «Time» newspaper has steadily deteriorated over six consecutive years because of their indisposition to adopt the new digital culture of knowledge. I asked Steve Forbes, the owner of the famous «Forbes» magazine, about the situation of his magazine, compared to the large decline witnessed by the Time magazine. Steve replied that

the magazine has achieved great and steady success because of involving into the new world of digital knowledge, and adopting the culture of celebrities and influencers in social media platforms.

3. Keenness to build your professional identity within the most famous and prominent figures and key players in your industry by building a distinctive brand in





the space of knowledge economy.

Entrepreneurs shall establish their positions among the most influential and outstanding figures to attract good opportunities and achieve success and excellence. This step made me pay great attention to engagement in writing, dissemination and promotion of content through radio stations, television programs, magazines, Internet broadcasting, fundraising events...etc.

I published seven books until now, and launched a digital magazine to build my credibility with the audience, and to promote my professional identity as a prominent mentor and expert in my industry. I produced a «Podcast» for a semi-radio program in the form of audio or visual series recorded and published on the Internet. A recent Podcast that I produced made a view rate of 6 million listeners.

It is important for entrepreneurs to make efforts for building what we called Marketing Funnel. The essence of the Marketing Funnel strategy can be explained in the following example: The point of attracting potential customers lies in the radio or television

programs which host me.

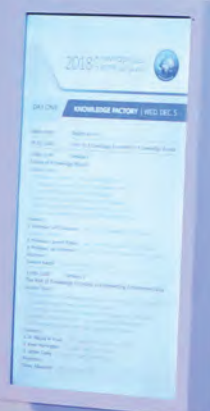
I present a gift for listeners and viewers to download a free chapter of my book on my website. After they visit the site, we offer them the basic offer by sending automatic e-mails within the strategy of the marketing target of potential customers. Visitors may not buy the products you offer; however, you get their contacts and you can use them later. There are more than 2.52 billion active users on Facebook for example, you can select 1800 different marketing target points, and this is the true meaning of the saying: «Knowledge is the real power».

Entrepreneurs may depend on the marketing strategy that is based on maintaining the existing customers and encourage them to buy products with higher value compared to products that are being promoted, or encouraging them to buy complementary and additional goods and products, the thing that is known in marketing science as «Precision Marketing». This exceptional marketing strategy has helped us build small successful brands (Microbrands) for small startups and entrepreneurs who launch their businesses on the Internet and make huge profits and great achievements. For example, the size of Kylie Jenner Cosmetics business reached \$800 million, and it succeeded in establishing a small successful brand that is worth billion dollars.

“**The audience replaced TV with social media platforms in the new age of knowledge and digital development.**”



# مصنع المعرفة KNOWLEDGE FACTORY







**Day 1**  
**Knowledge**  
**Factory Hall**





# Day 1

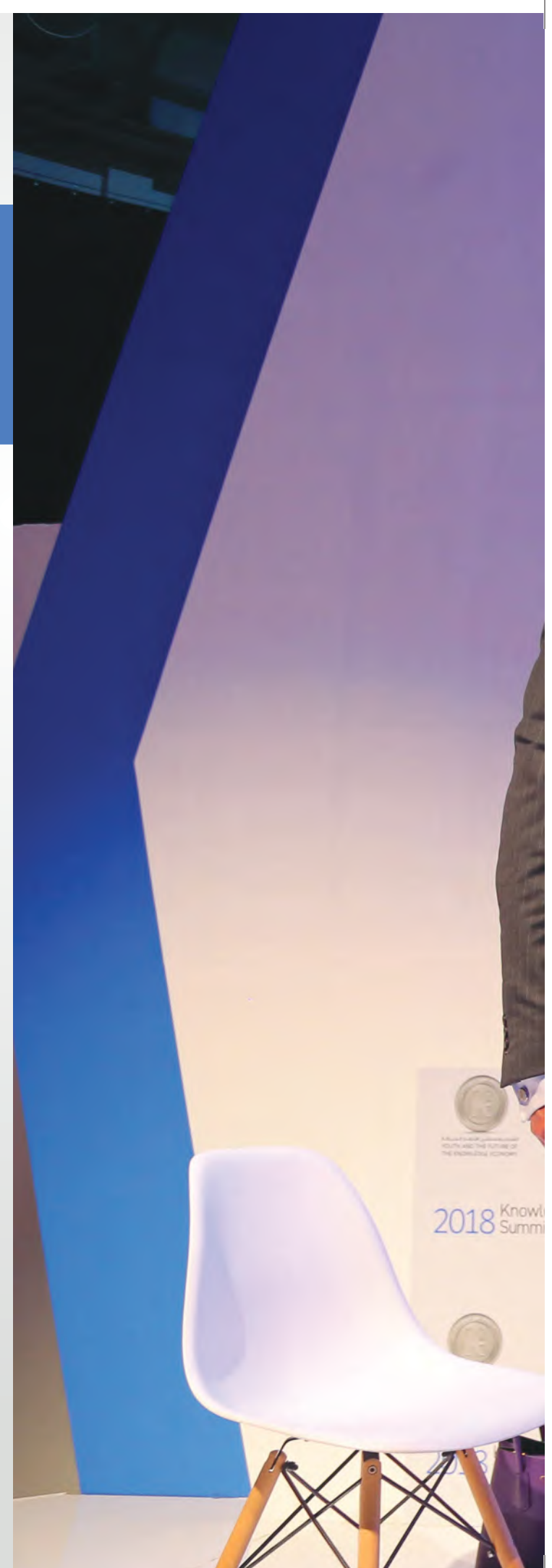
## Knowledge Factory

### Session 1

### Future of Knowledge Model

#### Topics

- Presenting the results of future knowledge model.
- Conceptual framework of the future knowledge model.
- Factors influencing the future of knowledge.
- What is the impact of big data on future knowledge?
- Has the role of traditional indicators ended?
- How can we benefit from the future of knowledge model?





# 2018 Knowledge Summit | قمة المعرفة





**Professor Leif Edvinsson**

**Professor of Knowledge Capital  
at Lund University, Sweden**

Leif Edvinsson is the world's first director of IC and then the world's first professor on IC at Lund University as well as Polytechnic University in Hong Kong. In 1998, he was awarded the UK's Brain Trust «Brain of the Year», and Listed in the «Who's Who» of the world.



**Professor Laurent Probst**

**PwC's Accelerator Network Global Leader**

Laurent is a Partner at the PricewaterhouseCoopers (PwC) Luxembourg and is the Global Network leader of the «Regional Innovation Ecosystem». Laurent is also responsible for 2 strategic European projects in 28 countries: the European Observatory for Innovation and the new «Digital Entrepreneurship Monitoring» designed to define and implement the next European policies.



**Professor Jan Stureson**

**Founder of RESTING -  
Advice from the Future**

Jan Stureson is a strategic advisor, international public speaker, and Founder of RESTING – Advice from the Future. Jan is also the senior knowledge advisor on strategic development regarding the smart city and future of society projects in Sweden, Norway and Brazil. Additionally, he has been advising UNDP on a project which focuses on the future of the Global Knowledge Index in 2017.



## Speakers



### **Professor Leif Edvinsson**

Professor of Knowledge Capital at Lund University,  
Sweden

### **Professor Laurent Probst**

PwC's Accelerator Network Global Leader

### **Professor Jan Stureson**

Founder of RESTING - Advice from the Future

## Moderator

### **Mrs. Youmna Naufal**

TV Program Creator & Correspondent





**Moderator:**

What do we need to recognize the knowledge model?



**Professor Jan Stureson:**

We need to build relationships between different sectors and humans, and the new generation should be aware that they are humans, not robots.



**Professor Leif Edvinsson:**

There is no one model, but there is the best one, which will be formed and approved at the end.



**Professor Laurent Probst:**

There are many ideas, volunteers and visions, which constitute a complicated situation that needs prominent efforts to deal with.



**Moderator:**

How can Arab countries take quick steps in building knowledge communities?



**Professor Jan Stureson:**

We must emphasize on modern techniques, real-time data, moving from past to present to jump to the future, depending on what was achieved by European developed countries in building knowledge communities.



**Moderator:**

I think you can extensively explain that in your keynote



**Professor Jan Stureson:**

Knowledge future is related to finding ways for knowledge and innovation, taking daring steps to catch up







with knowledge communities building, and trying to get more understanding.

Sometimes, if I say, «I do not understand something,» this is a wonderful thing, because at the next step I will recognize this matter, which means that I will acquire new knowledge and opinions. Similar knowledge cannot integrate, while the different knowledge will integrate with each other.

I can say that we are about to start the building of knowledge communities, which is a very important issue. We move from knowledge to wisdom age, i.e. the useful use of knowledge. We apply and recognize something then we step forward. Knowledge is

not only bounded to the development of educational knowledge, but it also evolves as a product of human creativity and innovation flows at an accelerated pace and depends on our relationships.

We meet one another, shape our future perceptions and expectations, and provide our interpretations from a human perspective. All these certainly depend on confidence because the lack of confidence will impede the building of knowledge society. Knowledge is a space between us as human beings and industries, sectors, jobs, different issues and perspectives. It is all about exchanging ideas.



**Moderator:**

You say that we have to control the building of knowledge communities, while maintaining knowledge flow. Is there any contradiction between the two ideas?



**Professor Jan Stuesson:**

I mean that we shall adopt a general governing framework and a specific model for knowledge. At the same time, free knowledge flow must be existent in partial manner. Each country shall have its own model, in addition to mutual interaction and communication between countries in the light of free knowledge flow, free innovation and disruptive creation, and community service. The process shall not be limited to the services provided by the community to its members, but it shall be mutual between the community and its members.



**Moderator:**

Mr. Laurent, I would like you to explain this subject, focusing more on the human side.



**Professor Laurent Probst:**

I would like to talk about a study of assessing future knowledge, using real-time data, which was prepared in collaboration with the United Nations Development Program, focusing on 22 countries. This study aimed to build and apply knowledge future model. We began to discuss the conceptual model of knowledge future and the future areas of knowledge. We chose four areas, namely Artificial Intelligence, Biotechnology, Cyber Security and Blockchain technology. We believe that these areas will be strategically important to all countries. Then we added the future skills as the fifth area. We measured these five development areas according to five dimensions, which are education, research, development and innovation, technology,



economy, and enabling environment.

We have adopted new methodologies based on real-time big data, including platforms. Social media monitoring allowed us to have access to more than 150 million public sources in more than 180 languages. We used two indicators, which are how many times certain topics were mentioned and the participation level. In addition, we used 25 queries covering 277 keywords, which translated into 15 languages, and 52,000 scales, resulting from collecting more than 25 possible relationships between future areas and knowledge dimensions for 52 weeks in 20 countries. Finally, we got 4.8 million signals during these analyses.

The most important finding is that we are not on the same level of communication and contribution in the future of knowledge. If we study the levels of interest in knowledge future, we will find a lot of diversity and differences. There are countries that recorded less than 1,500 points, such as Chile, Brazil, Egypt, Jordan, India, Morocco and Tanzania. Moreover, there are countries that recorded less than 3,000 points such as Sweden, UAE, Germany and Japan, and some countries recorded more than 3000 points, such as USA, Singapore, Switzerland, Finland, UK and the Netherlands.

The other important finding of our study is that all countries are preparing themselves for the future of

### Conveyance of knowledge

“depends on three dimensions, namely location, direction and speed.”

knowledge, with various levels of preparations and intensity. The alternative indicator methodologies provide new insights for policymakers and stakeholders. Moreover, countries that recorded the highest rates of discussions about these indicators on websites are among the best working environments. In relation to knowledge dimensions, research, development, innovation and science dimension occupies the first rank with 30.4% of the total online activities, then economy and education with 26.1% and 24.8% respectively.

I believe that these results are good, but we still need to have more discussions and dialogues among countries, take joint procedures, and transform efforts into information and policies, then apply the same.



#### Moderator:

I think there may be some concerns about the inability to cope with this change related to knowledge future. Can you tell us about this change?





**Professor Leif Edvinsson:**

Conveyance of knowledge depends on three dimensions, namely location, direction and speed. These di-

mensions are measured at two levels, the innovation level «Building the Future» and the business intelligence level «Understanding the Future».

In this regard, it is important to point out that we need to adjust the pace of modernization. Interestingly, despite the fact that media tends to focus on negatives and points of weakness, we can say that there are some indicators such as literacy rates, child mortality







rates and Internet use, which show that we keep improving and things are not bad as the others believe. Therefore, I believe we should emphasize the positive trends rather than the negative ones.

If we look at UAE's position from the perspective of innovation and GDP, we find that it occupies a distinct position compared to its position in the intellectual capital development field. It is not only limited to education, but also to the promotion of culture and its context, to reach the so-called «Value Galaxy», not the «Value Chain» as known. We are now dealing with a new category of the socio-economic sector, which is used as a new sector to rebalance society. This sector will depend on Generation Z. It is a completely new dimension. There are more steps that will lead us towards the knowledge future era, and the most important one is to move from mental to brain thinking, or the so-called «computer brain».



**Moderator:**

Do you have any strategic advice for UAE's progress in the field of intellectual capital development?



**Professor Leif Edvinsson:**

My advice in this regard is that relationships should not be limited to sectors, industries and states, and shall be among individuals, to establish intelligent linear relationships among individuals.



**Professor Jan Stureson:**

I think that the most important thing is to invest in science, material science, and neuroscience infrastructures. The academic scientific infrastructure is very important.



**Professor Laurent Probst:**

In my opinion, the most important thing is to upskill individuals, because we found skills gap worldwide.







**Moderator:**

Professor Leif, it is exciting and scary at the same time, because if you do not prepare yourself or get ready, you will not be able to cope with the change, because the evolution speed is unreasonable.



**Professor Leif Edvinsson:**

Future comes in seconds, so you shall use the Internet and social media sites to be able to cope with the future.



**Professor Jan Stureson:**

I believe that the latest invention here is the Hyperloop between Dubai and Abu Dhabi, which transports people in seven minutes only. It is exactly the trend, which we should follow and cope with.



**Moderator:**

You all have said that, as we look forward to the future, we must focus on the human side. In this regard, what is your advice on moving forward towards the future?

**I believe that the latest invention here is the Hyperloop between Dubai and Abu Dhabi, which transports people in seven minutes only. It is exactly the trend, which we should follow and cope with.**



**Professor Jan Stureson:**

I believe that there should be deep relationships among individuals, who think differentially. In addition, there should be exponential learning among people coming from different understanding domains. We shall foster the liberty to speak and work, and to integrate cultures.



**Professor Leif Edvinsson:**

There must be an integration between generations. This approach shall not be limited to the appointments, but we shall call the new generation for new types of management approach and build intelligent alliances with them.



**Professor Laurent Probst:**

I can say that the main point is the ability to learn quickly, effectively, and for the purpose of learning.





## Day 1

# Knowledge Factory

### Session 2

## The Role of Knowledge Economy in Empowering Entrepreneurship

### Topics

- The contribution of entrepreneurship sector to the economy of countries and the development of their competitiveness edge.
- The future of entrepreneurship amid the challenges in the Arab region.
- Business incubators and their role in the economic development.
- Entrepreneurship development and sustainability solutions.





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## Speakers

### **Mr. Jordan Casey**

One of the world's youngest serial entrepreneurs

### **Mr. Kevin Harrington**

Entrepreneur, co-founder of the Entrepreneur's Organization

### **DR. Majida Al Azazi**

CEO , Sandstorm Automotive Factory

## Moderator

### **Omar Al-Busaidy**

Host of «Future Talk» on pulse95 radio



**Mr. Jordan Casey**

**One of the world's youngest serial entrepreneurs**

A BAFTA-nominated, 18-year-old entrepreneur and self-taught programmer from Ireland. He started a project called «Teenage Entrepreneur Movement». He earned the Best Innovation award at the Student Enterprise Awards as well as clinching first place at the BT Young Scientist and Technology Exhibition.



**Mr. Kevin Harrington**

**Entrepreneur, co-founder of the Entrepreneur's Organization**

An original «Shark» on the hit show «Shark Tank». A pioneer of the As Seen on TV brand, and a co-founder of the Entrepreneur's Organization. He founded a company called Quantum International and became the president of National Media.



**Dr. Majida Al Azazi**

**CEO, Sandstorm Automotive Factory**

The first Emirati woman in the Middle East with a Doctorate of Business (DBA) in Supply Chain Management and Manufacturing from UAE University. She opened a car factory in 2017. She has held numerous positions in various sectors, both Government and Semi-Government. She has a membership of the Abu Dhabi Business Women Council, the Emirates Volunteer Society.







**Moderator:**

Dr. Majida, please tell us about yourself and your success story.



**Dr. Majida Al Azazi:**

I have gained considerable experience in the business administration field while I was studying my PhD since 2004. After I finished my PhD, I got an idea and spoke with the operations Manager about it. He told me that my way of thinking is beyond reality. After seven years, he became the operations manager in my factory.



**Moderator:**

Mr. Kevin Harrington, tell us more about yourself, the story of your success and how did you get to be in (Shark Tank) program?



**Mr. Kevin Harrington:**

I was watching «Discovery» channel, and suddenly the screen went dark for six hours; I called the TV company and told them I cannot see any programs showing! They told me that the channel works only for 18 hours. Therefore, I began to present television programs for them to sell products. I was marketing all the products you can see on the TV screen in these programs, hence the «As Seen On TV» industry started.



**Moderator:**

This is amazing Kevin, but some people may not like paid advertising; what would drive them to subscribe in the «Netflix», not to mention ads?!



**Mr. Kevin Harrington:**

There are millions of people watching these programs, and buying from it effectively.



**Moderator:**

Can I ask you what have you done with your first million?





**Mr. Kevin Harrington:**

I bought a house and a real estate whose value will maximize.



**Moderator:**

Jordan, tell me more about yourself, about Teenage Entrepreneur Movement, and how you became the youngest entrepreneur in the world?



“ We are now pioneers in the region, especially in knowledge economy and many other things. ”



**Mr. Jordan Casey:**

I programmed my first application when I was nine. Two years later, I programmed My Games, eventually I developed applications for «iPhone». I started my first company at the age of twelve, and during the last two years, I established two companies working in the technology field. I contacted people like me: innovators, young entrepreneurs, and young creators, where all those gathered to start the Teenage Entrepreneur Movement to establish a global network of young entrepreneurs and inventors to support each other.



**Moderator:**

Making balance between school, homework and management of this enormous organization is difficult, how did you make that balance?



**Mr. Jordan Casey:**

It is difficult to set a balance between these things, of course. I am currently studying business administration at the university, at least there is some similarity between what I study and what I do, but in secondary school, it was different!



**Moderator:**

Dr. Majida, what is your vision for the transformation in UAE, where we were in the past, and where we are standing now, and what your expectations for the future?



**Dr. Majida Al Azazi:**

We are now pioneers in the region, especially in knowledge economy and many other things. This





did not come in vain, but came from good planning. Knowledge economy is basic for new economic development, and the basis of a new perspective of the country's economy.



**Moderator:**

Mr. Kevin, can you tell us, from your experience, how does the United States economy encourage young people like you to engage in entrepreneurship, and how did the ecosystem in United States support you?



**Mr. Kevin Harrington:**

When we are talking about youth support in United States, today there are many opportunities for entrepreneurs to engage in business, which had not been available to us in the past. Today you can get collective funding; you can come up with an idea and put it on collective funding site, and start your project.



**Moderator:**

Mr. Jordan, one of every 23 individuals aged between 18 and 64 years in Ireland is an owner of a new company! This is according to Global Entrepreneurship Index 2016, does the government in Ireland support entrepreneurs?



**Mr. Jordan Casey:**

Indeed, economic crisis hit Ireland dramatically. There was a great depression, and I think people who have lost their jobs decided to start their own businesses. Then Ireland started a new wave of change. The government supported young entrepreneurs, allocated a lot of funds and funding sources for them, and launched several initiatives for youth.



**Moderator:**

How do you see the competition of other car manufacturers, and those who are afraid of losing their savings?



**Dr. Majida Al Azazi:**

This is a very strong challenge, especially when the competition starts with international companies. However, I have some good news: in addition to (Sand Storm), we will start a new company (Sand Wave) to manufacture electric cars.



**Moderator:**

Mr. Kevin, why did you establish Entrepreneur's Organization? How did you do it?



**Mr. Kevin Harrington:**

In 1987, when I was a young entrepreneur, I fell in many troubles and tried hard to collect capital, so I started meetings with other entrepreneurs who wanted to achieve the same goal.





We agreed to establish an organization that enables us to share with other entrepreneurs our thoughts about: How do we start a business? How can we get access to capital? In addition to many other important things, then we established the organization in 1987. Now we are the largest organization in the world of this kind, we have offices in 150 cities, in 45 countries around the world.



**Moderator:**

Is thinking about entering the field of programming and use of digital skills common among young entrepreneurs?



**Mr. Jordan Casey:**

Without the Internet, I would not be where I am now. If I want to build a game right now, I can reach millions of people, just with a push of a button. I think this is a powerful advantage, not only for entrepreneurs in programming and digital field, but for artists and filmmakers entrepreneurs as well.



**Moderator:**

Many studies state that when women start a business, they succeed by 90%, while when men under forty start a business, they fail with percentage exceeding 50%. I do not know anything about teenager's percentage because there are no studies about them, but from your experience do they succeed? Where they stand now?



**Mr. Jordan Casey:**

I do not think the failures are not successful because the failures are very important. We learn from failure, and what we are trying to do is showing the world what youth and adolescents can achieve if they find a platform to express themselves, or find the right opportunity, and this what I want to do through Teenage Entrepreneur Movement.

**I do not think the failures  
are not successful  
because the failures are  
very important.**



**Moderator:**

Dr. Majida, would you tell us about your role, how do you see women's participation in Abu Dhabi Business Women Council, how do things go there?



**Dr. Majida Al Azazi:**

Abu Dhabi Business Women Council is no different from other councils in the UAE. They all support the role of women, not only in business as entrepreneurs, but also in housework. The council gives them the opportunity to master necessary skills through training courses and workshops.



**Moderator:**

Mr. Kevin, you wrote a book entitled «Act Now! How I Turn Ideas into Million-Dollar Products, » so how did you turn these ideas into million-dollar products?



**Mr. Kevin Harrington:**

I meet the owner of the product and make a promotional video talking about it. We sell products start from \$12 to \$100, but sometimes up to \$300. We make a video about the product and put it on Instagram, Facebook, YouTube and other sites.



**Moderator:**

Tell us about your experience in (Shark Tank), how did you become an original «Shark»?



**Mr. Kevin Harrington:**

One day, I received a call from the producer. He told me that he wanted to produce a program, where the contestants would give a brief overview, and we would be five investors listening to





contestants' ideas. In five minutes, we had to decide whether it was a good idea to invest in or not. When he told me that, I told him this is what I do every day in my daily life! Because I am presenting promotional offers all year long, and people come to me with products to determine whether this product is worth investing in or not. Therefore, I have become an original «Shark» in (Shark Tank). Now, the program is broadcasting in most countries of the world and comes in local form.



**The basics of  
knowledge economy  
start from school.**



**Moderator:**

Jordan, what are your plans after graduation? Will you continue in entrepreneurship or maybe you will think about getting a job somewhere else?



**Mr. Jordan Casey:**

My goals for the future are centered on Teen-age Entrepreneur Movement. As long as we are



a digital network on the Internet, we will try to form a network of many young people and teenagers from all over the world, who can help us adopt young entrepreneurs in various fields.



**Moderator:**

Dr. Majida, do you want to add a final word?



**Dr. Majida Al Azazi:**

Knowledge economy starts with youth. We have to support them from the first day in school to postgraduate studies.



**Moderator:**

Mr. Kevin, do you want to add a final word?



**Mr. Kevin Harrington:**

I agree with Dr. Majida that the basics of knowledge economy start from school. That's why I am lecturing in many universities in the United States.



**Moderator:**

Do you have a final word, Jordan?



**Mr. Jordan Casey:**

I am focusing now on Teenage Entrepreneur Movement, where we are trying to establish a branch here in Dubai, if anyone wants to discuss this matter, I will be happy to discuss it.





# Day 1

## Knowledge Factory

### Session 3

## Digital Economy and Knowledge Economy: Rivalry or Alliance?

### Topics

- How did knowledge economy contribute to the emergence of digital economy?
- Digital Economy as one of the pillars of the Knowledge Economy.
- E-Commerce and cross-border data flows.
- Digital Consumption in Knowledge Economy.
- Internet of things: People, Places, Products and Possibilities.











**Dr. Ahmed Bin Ali**

**Senior Vice President of Etisalat Corporate and the spokesperson for Etisalat Group**

Dr. Ahmed Bin Ali held several positions, including Vice President of Corporate Relations at Etisalat Group, and was awarded the Award of Excellence in the Exceptional Leadership and Professional Achievements in Corporate Communications 2012. He received his Ph.D. from Harvard College in USA in 2012.



**Dr. Simon Galpin**

**Managing Director of the Economic Development Board**

A Doctor of Juridical Science, holding Master's Degrees in Business Administration, Local Economic Development and International Business Law, and recently having graduated as a Doctor of Juridical Science. He was appointed as a managing Director of the Bahrain Economic Development Board (EDB) in February 2016.



**Mr. Sarfaraz Alam**

**Chairman of TEXPO Group of Companies**

He obtained MBA from the Indian Institute of Technology. He is the CEO and co-founder of HashMove- a smart marketplace for the logistics industry and the originator of RORY, a construction related marketplace, and steered the organization towards creating a significant niche for itself in the G.C.C & South Asian regions.

## Speakers



### **Dr. Ahmed Bin Ali**

Senior Vice President of Etisalat Corporate and the  
spokesperson for Etisalat Group

### **Mr. Sarfaraz Alam**

Chairman of TEXPO Group of Companies

### **Dr. Simon Galpin**

Managing Director of the Bahrain Economic  
Development Board

## مؤتمرات

### **Mr. Tom Goodwin**

EVP of Innovation at Zenith Media, USA



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**Moderator:**

In this session, we will discuss the relationship between technology, knowledge economy and the digital economy. We will address topics such as connectivity, artificial intelligence, broadband access, investment in infrastructure and software, and the relationship between education, technology and other topics.



**Dr. Ahmed Bin Ali:**

One of the most important matters related to technology and digital economy is the existence of modern infrastructure. In the UAE alone we have deployed more than three million kilometers of optical fiber! Through the 3G network, we tried to reach 99% coverage, and almost the same with the 4G network. Since we launched the 4G network, we have started testing the fifth generation network.





**Moderator:**

When talking about technology here in Dubai, what do you find inspiring about knowledge economy and digital economy?



**Mr. Sarfaraz Alam:**

We do not know the fear of failure or lack of appreciation; the works we are doing are speeding up. We do not look at the consequences and challenges that may prevent us from achieving our hope.



**Moderator:**

How to build a bridge between technology and knowledge?



**Dr. Simon Galpin:**

It is good for us all to have the physical infrastructure. Amazon Web Services will open three major data centers, and there will be a data region in Bahrain starting in the first quarter of the next year. So, physical infrastructure is very interesting to talk about, but from an economic development point of view, the secret lies in soft infrastructure. This means to focus on the required skills; all people have to access the digital economy and benefit from this kind of economy, as well as the existence of appropriate regulations and laws.

Bahrain team is working to engage everyone in the business -the private sector, the public sector and the education sector- by adopting an approach to do business very quickly, which we do with Amazon Web Services, where we are working on many changes in this regard.

**In the UAE alone we have  
deployed more than three  
million kilometers of  
optical fiber!**





**Moderator:**

Is this team designed to attract companies like the size of Amazon or is there an approach to support startups?



**Dr. Simon Galpin:**

There is no doubt that Amazon is a very big opportunity, but I in fact tend more to the emerging business ecosystem. We often ignore small businesses, while they have a much deeper impact on the economy of large multinational corporations because small busi-

**We often ignore small businesses, while they have a much deeper impact on the economy of large multinational corporations.**

nesses grow and their loyalty goes to those companies, and are deeply entrenched in the local economy.



**Moderator:**

When talking about regulations and innovation, and looking at many examples such as financial and other technology, how can such a generation of enterprises be empowered?



**Dr. Ahmed Bin Ali:**

What I propose is that we need to change our way of thinking a bit, especially with regard to the future, where 45% of the existing tasks can be automated with current services, and there are things invented



but we have not used them yet. We want to inject those things into our business. Future recruitment requirements will hire more developers. If we know that there are about 10 million developers now developing services and innovations in the future, this will give us the necessary motivation and encouragement. 33% of the jobs that will be in 2020 do not exist now!

We have set up in Etisalat a unit called «Digital Communications», where we had a vision three years ago to create a complete unit dedicated to various digital solutions, and we have more than 145 million customers. There is also artificial intelligence, for example contact lenses that let you become connected to the Internet to see the whole world in a blink of an eye! If we talk about robots and what they can do -especially in education and health care- we will have current services and an economy that depends on computing and digital services.



**Moderator:**

When thinking about the future regarding technology, infrastructure and software development, what is the most important aspect when talking about growth?







**Mr. Sarfaraz Alam:**

When it comes to growth, the first element is infrastructure, the world is now turning to connectivity, so the concept of the commercial market has emerged all over the world. Another important concept that has emerged in the world for a long time is the concept of logistics business, where it has already achieved profits of \$53 billion in five GCC countries, \$120 billion in the UK and \$2.8 trillion in China.

Logistics are a huge field, so we have benefited from our technology and the old infrastructure and have already developed a platform that can easily connect logistic services worldwide.



**Moderator:**

Through your experience in Bahrain, and your point of view regarding software, regulations, education and others, do you think there is another technology or knowledge that may be deeper?



**Dr. Simon Galpin:**

I think there will be a backlash, I do not think people will line up at the Louvre in Abu Dhabi to see a picture taken by a robot. I think people will yearn for real human communication. We must pay attention to the future for many things, such as creativity, personal skills, interpersonal communication skills, and mutual critical thinking.



**Moderator:**

For Etisalat, what are the big goals you set for technology in the future?



**Dr. Ahmed Bin Ali:**

We launched the fifth generation network commercially in Expo 2020 and promised to be the fastest and most

interactive location on the planet.

We are working with Expo 2020 to achieve this. There are also services dedicated to the education sector. You can learn all the information you want through the use of enhanced reality or artificial intelligence.



**Moderator:**

Speaking of smart cities, what initiatives are you putting in this regard?



**Mr. Sarfaraz Alam:**

Smart City is a city that knows how to use technology and make a good use of it. We are talking about the beauty of integrating technology in a way that makes the best use of these systems. The important thing about creating smart cities is to connect and communicate with other cities smoothly and easily; that's what we mean by intelligence. The infrastructure in these cities is interconnected, and all services are provided through one outlet. We have also talk-





ed about building a smart logistics center in Dubai to be the world's largest intelligent logistics center. For example, we have an ID card system that can provide many services, such as personal identification while traveling, and other services such as health services; with a single card you can get many services.



**Moderator:**

When you look at the region and other countries, what draws your attention in regard to the techniques and currencies they have?





## Attendees' Questions



### Dr. Simon Galpin:

We are working on the principle of taking advantage of the best existing practices. We have no fear of imitating people who preceded us in good things, as this helps us in our work. It requires finding someone who can analyze ideas and deal with Internet of things, such as large carriers and hard-core companies. This makes that technology interesting.



### Mr. Sarfaraz Alam:

Technology has become a way of life that we cannot change. Every time a new technology emerges, we have to adopt it and commit ourselves to it, because that makes our lives easier, and we have to take advantage of technology.

“ **Technology has become  
a way of life that we  
cannot change.** ”



### One of the attendees:

Finally, the EDB has entered into many partnerships. How can these relationships be utilized?



### Dr. Simon Galpin:

Engaging in international partnerships is very important to help startups grow. In Bahrain, I think we have a distinctive mix of local entrepreneurs, investors from other countries, multinationals and cultures.



### One of the attendees:

Does the «Innovation Center» support startups, especially those in the technical field, and does the center cooperate with similar centers in Bahrain, for example?





**Dr. Ahmed Bin Ali:**

The Innovation Center is open to anyone looking for innovative solutions and examples. We help startups by providing customized communications solutions and services that enable them to take care of their businesses and emerging businesses, and leave the business of communication services to us.



**One of the attendees:**

How do you see the role of research and development and how to help startups and small and medium enterprises in discovering new ideas related to artificial intelligence, robots, large data and cyber security?



**Dr. Ahmed Bin Ali:**

In terms of research and development, the company supports the ICT Development Fund with 1% of its



revenues annually. The company has established an academy offering technical and non-technical training courses to various entities.

Etisalat has contributed to the establishment of a medical academy in Sharjah. This is in addition to the use of social networking platforms to identify the feedback of customers and know what they want from our services and networks, and then forwarded the good ideas to the research and development centers in the Fund Development of the ICT sector.



#### Dr. Simon Galpin:

In Bahrain, there is a gap regarding spending on research and development, and competing with other economies. We are filling this gap, but it will take time. We need to motivate universities to participate in this process, not only by educating institutions but by car-

rying out research and development to support those Institutions. It is important to involve large companies in Research and Development activities.



**The Innovation Center is open to anyone looking for innovative solutions and examples.**







## Day 1

# Knowledge Factory

### Session 4

## Digital Libraries and the Future of Knowledge Economy

### Topics

- The role of digital libraries in shaping the future.
- Dubai Digital Library: the future of smart knowledge.
- The impact of digital libraries in knowledge management and knowledge economy.
- The prospects of smart knowledge in the UAE.

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Summit







**Dr. Saud Al Salahi**

**Director General of Saudi Digital Library (SDL)**

Advisor of the Vice Minister of Education, Secretary General of Translation Unit, Ministry of Education. He had PhD in Curriculum and Teaching Methods, and Higher Diploma in Management and Economy, Exeter University. He had his Master in Educational Administration from Umm Al-Qura University.



**Dr. Khaled A. Mohamed**

**Head of Dubai Digital Library**

Professor of Information Science and Knowledge Management. He obtained a PhD from the University of Pittsburgh, USA, and two master degrees from Cairo University and University of Pittsburgh. Currently, he is the Head of Dubai Digital Library and Knowledge Solutions at the Mohammed Bin Rashid Al Maktoum Knowledge Foundation.



**Dr. Abdulla Al-Hefeiti**

**Dean of Library at Khalifa University for Science and Technology, Abu Dhabi**

He was the Dean of Masdar Institute of Science and Technology Library. He also worked as Assistant Dean of Library affairs (2007-2011). He obtained his MLIS from North Carolina Central University (2002) and PhD from Cairo University (2011).



## Speakers



### **Dr. Saud Al Salahi**

Director General of Saudi Digital Library (SDL)

### **Dr. Khaled A. Mohamed**

Head of Dubai Digital Library

### **Dr. Abdulla Al-Hefeti**

Dean of Library at Khalifa University for Science and Technology, Abu Dhabi

### **Dr. Detlef Klomfass**

DeBoSys Founder

## Moderator

### **PhD. Husam Sultan Al Ulama**

International Relations Affairs and Higher Education  
Policy Expert





TEACHER-LED  
**CLASSROOMS**



PROJECT-BASED  
**LEARNING**

TRADITIONAL  
CLASSROOMS



**FLIPPED**  
CLASSROOMS

INDEPENDENT  
LEARNING



COLLABORATIVE  
LEARNING

INDIVIDUALIZED  
LEARNING



PERSONALIZED  
LEARNING







Dr. /Detlef Klomfass

DeBoSys Founder

Founder of DeBoSys-New Business Manufacturing company in Germany 10 years ago. He was the Managing Director of Wiley & Sons/CrossKnowledge GmbH in Germany. He worked as a commercially-focused executive in the field of pharmaceuticals, e-business, and in the field of digital learning and training.







**Moderator:**

This session is entitled «Digital Libraries and their role in the knowledge economy,» and we start with the first lecturer, Dr. Saud Al Salahi.



**Dr. Saud Al Salahi:**

I will try to be brief when talking about the role of digital libraries and the future of the knowledge economy, and how digital libraries contribute to the knowledge industry, and to the building of professional societies and knowledge societies that is pursued by technological, political, cultural and educational transformations for the diversification of economy and the investment of knowledge.

We all know that knowledge goes through three stages: First, generation of knowledge: Digital libraries do not generate knowledge but rather gather, organize and store knowledge, while universities, research institutions and knowledge institutions produce and generate knowledge. This is the second stage of knowledge formation.

Then comes the stage of using knowledge, which is the basic stage for knowledge societies to move to societies that share information for the development of education, health, trade and industry are the knowledge societies. There are several roles for digital libraries in building knowledge societies, including building the aptitudes and skills of researchers, competencies and human resources. They should seek to build the capacity of researchers to increase information awareness and to undertake the task of making local content more accessible and useful. Local information would become localized and would have comparisons and standards with global information.



**Moderator:**

We welcome Dr. Khaled Abdelfattah Mohamed.



**Dr. Khaled Abdelfattah:**

Dubai Digital Library is one of the mediums that we have in hand. I believe it is only the start to the shift

towards smart knowledge, in which knowledge is available to anyone at any time.

Dubai Digital Library operates on three main themes: The first is digital content; this content is the transition from traditional content in the form of PDF to smarter content that is EPUB and HTML format. It can also work on Android applications, and we have completed an IOS application. We are characterized by the huge size of our content that we provide and we are growing very quickly. As for technology, it is built on the level of an institution, and it can also work at the level of the state, and at the level of a consortium or a group of institutions within several countries.

We want to move from the stage of consuming knowledge to the production of knowledge, and then we become a participant in knowledge. This is the second phase, and then comes the third stage, the stage of knowledge localization, which enables us to play a key role in the educational process. The fourth stage is the production of knowledge, both on the level of digital solutions and digital content. The fifth stage is the building of knowledge institutions and organizations. The sixth Stage is to contribute to the

“**Digital libraries do not generate knowledge but rather gather, organize and store knowledge.**”



knowledge-content industry and digital solutions. If we only use knowledge, we have done nothing and we have not completed our path.



**Moderator:**

We now move on to the third speaker, Dr. Abdulla Al-Hefeti.



**Dr. Khaled Abdelfattah:**

As an introduction to the session and the dialogue today, I would like to talk about the industry of the future. We all hear about the industry of the future, and this is linked to three main and essential topics: The first is the data, including artificial intelligence and the Internet of Things and Big Data. The second is information and its processes such as: compilation, organization, processing and analysis. The final product is knowledge; it is related to the common issues between data and information.

Today there is a need for digital transformation. There must be an interest in content solutions and





building libraries and digital repositories. There are a lot of experiences in this field. For example, we were required to integrate four libraries into one entity, which is the library of Khalifa University. We have worked to unify electronic resources, the institutional repository, the literacy program and the library portal on the Internet.

This was one of the biggest challenges we had faced. In less than five months we have been able to combine four libraries of different systems under one entity; it is called the Khalifa University Library. Today, we can

see how the merger has been reflected in the power of research at Khalifa University. It is the first of its kind in the UAE, and it has finally become one of the top 200 universities in the world in science and technology.



**Moderator:**

We move on to the fourth and last speaker Dr. Detlef Klomfass.



“ Learning must be meaningful,  
not just throwing content in a  
book or video clip only. ”



**Dr. Detlef Klomfass:**

According to Leo Buscaglia, an American writer: «Change is the inevitable outcome of real learning», so what is the real learning? There is a clear relationship between change and learning, so without learning, change will not happen. So, the question is how do people learn? Even the way people learn is subject to change. Traditional Learning has changed and become reverse learning. So, how do people learn and acquire the knowledge and skills they need? First, I think it is very important for many people to have the ability to make use of educational content, learning mediums and digital libraries in a fast way. Speed is also an important point, as the speed and time of knowledge are crucial elements for success. The quality must be excellent. You cannot use poor content and video clips. Cost should also be reduced. Learning must be meaningful, not just throwing content in a book or video clip only. In addition, learners need to leave the learning environment, whether it is a library or a student hall, with a positive feeling



**Moderator:**

And now with a final minute with Dr. Khaled.



**Dr. Khaled Abdelfattah:**

We suffer from the dispersion of resources available to all of us from several institutions, and we need integrated solutions to collect all these resources to be available to users and institutions. We are working on an integrated solution to provide resources in the UAE community. We call this solution «smart knowledge hub-UAE,» which serves the three parties of the system: individuals, institutions and governments. The second solution we are working on is an integrated solution for the digital libraries available in this community within this country. In Dubai Digital Library, we have begun to analyze the information search trends of the beneficiaries in order to enrich digital content based on these trends. This can also be achieved at the national and regional levels.





**Moderator:**

Now is the time for interventions, inquiries and comments.

**Attendees' Questions**



**One of the attendees:**

Dr. Salah, we are an audio application company with Arabic content «Al Rawi» application. Are you willing to deal with audio content? Another question, you mentioned that Dubai Digital Library is available to anyone in the UAE, why not be available to anyone in the world?



**Dr. Khaled Abdelfattah:**

There are rights that are paid by the Mohammed Bin Rashid Knowledge Foundation to the owners of

intellectual and material rights at the national level. However, to make it available to everyone in the world, this exceeds the capacity of any entity, so, at the global level, we provide the content, whose rights we own, and what the global community allows or what is called the content of open access.



**Dr. Saud Al Salahi:**

With regard to audio materials, the Saudi Digital Library welcomes any content that matches the informational needs of beneficiaries.



**One of the attendees:**

Can you give us an idea of the challenges related to Arabic content copyrights?

**We have begun to analyze the information search trends of the beneficiaries in order to enrich digital content based on these trends.**



#### Dr. Khaled Abdelfattah:

Many individuals complain that publishers have not closed the gap between the institution that allows and the institution that grants the right. Some contracts may end because they are limited by 5 or 7 years terms, but not due to the rules governing copyrights at the international level to regulate these rights. The most important point is how to bridge the gap be-

tween the author and the right holder after the end of the contract.



#### Dr. Saud Al Salahi:

We are facing the problem of poor content, poor mediums, and repetition of content from one publisher to another concerning the Arabic content, which occurs a lot.







**One of the attendees:**

When are we going to see organized and periodic meetings to share experiences and expertise that could evolve into an Arabic partnership or a consortium of digital libraries?



**Dr. Abdulla Al-Hefeiti:**

We are in the process of activating training programs on the Internet or directly. I expect that we are able to achieve this cooperation or integration soon.



**Dr. Khaled Abdelfattah:**

We are launching an initiative for cooperation among Arab countries to transfer work from the local scale to a larger scale within the framework of cooperative programs.



**Dr. Detlef Klomfass:**

We are in touch with solution platforms providers and with thousands of publishers, which technically means we have connected them, but that depends on the business model and how we can collaborate with them.

**One of the attendees:**

What is your vision for the future of physical libraries on the near and long term?



**Dr. Khaled Abdelfattah:**

We still have physical libraries and books, which play an important role in our lives, and some people prefer physical books.



**Dr. Khaled Abdelfattah:**

The integration of traditional libraries with the digital libraries is necessary to move from a society of scarcity



to a society of abundance, from the information revolution society to the information wealth society.



**Dr. Saud Al Salahi:**

The Saudi Digital Library is willing to build partnerships on the common purchase of some rules to acquire new assets instead of being bought by a single library, and may not be able to do so, but four parties can possess sources of information in some disciplines.



**Dr. Detlef Klomfass:**

I recommend that you complete the process of cooperation, coordination and participation. You have started doing a lot in Saudi Arabia and the UAE, and you can build on what you have achieved before.

**“ We still have physical libraries and books, which play an important role in our lives. ”**



# Knowledge Summit عرفة

أحمد بن محمد بن راشد آل مكتوم  
Mohammed bin Rashid  
Al Maktoum Global Initiative







Day 2  
Knowledge  
Arena Hall



## Day 2

# Knowledge Arena

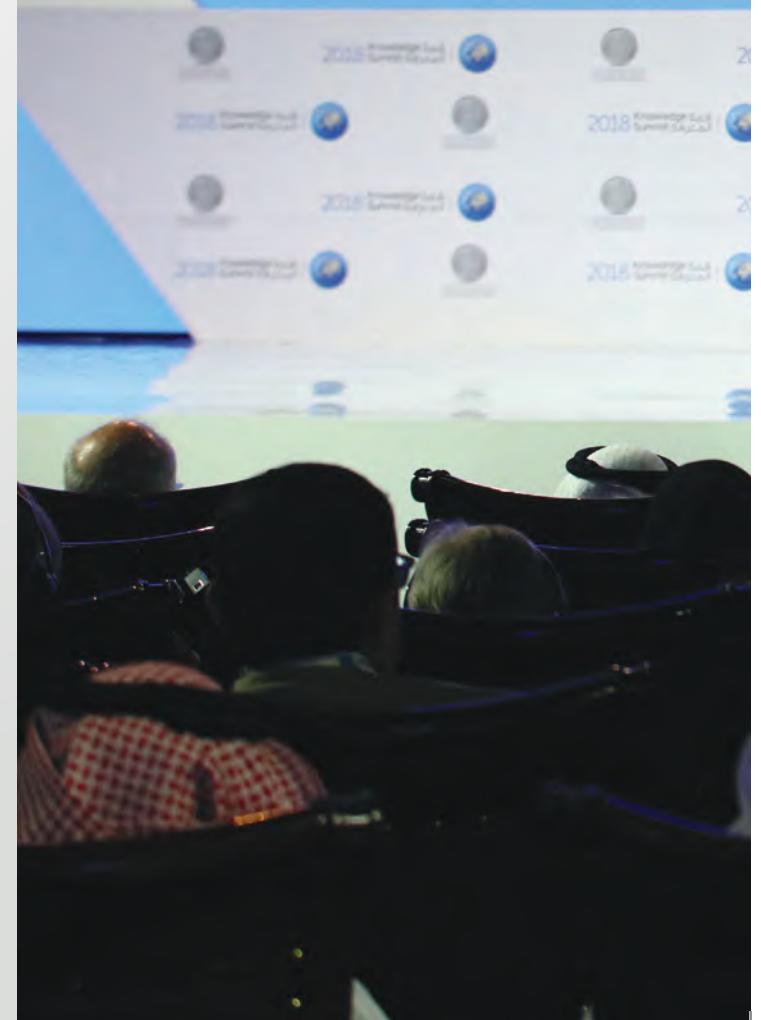
### Session 1

## Global Knowledge Index

#### Topics

- Key Findings of the Global Knowledge Index 2018.
- The role of MBRF in Spreading Knowledge.
- The Importance of Partnership between UNDP and MBRF.
- How to Use the Results of the Global Knowledge Index to Build Knowledge Societies?
- Means of Reducing the Knowledge Gap within the Arab Region.

# 2018

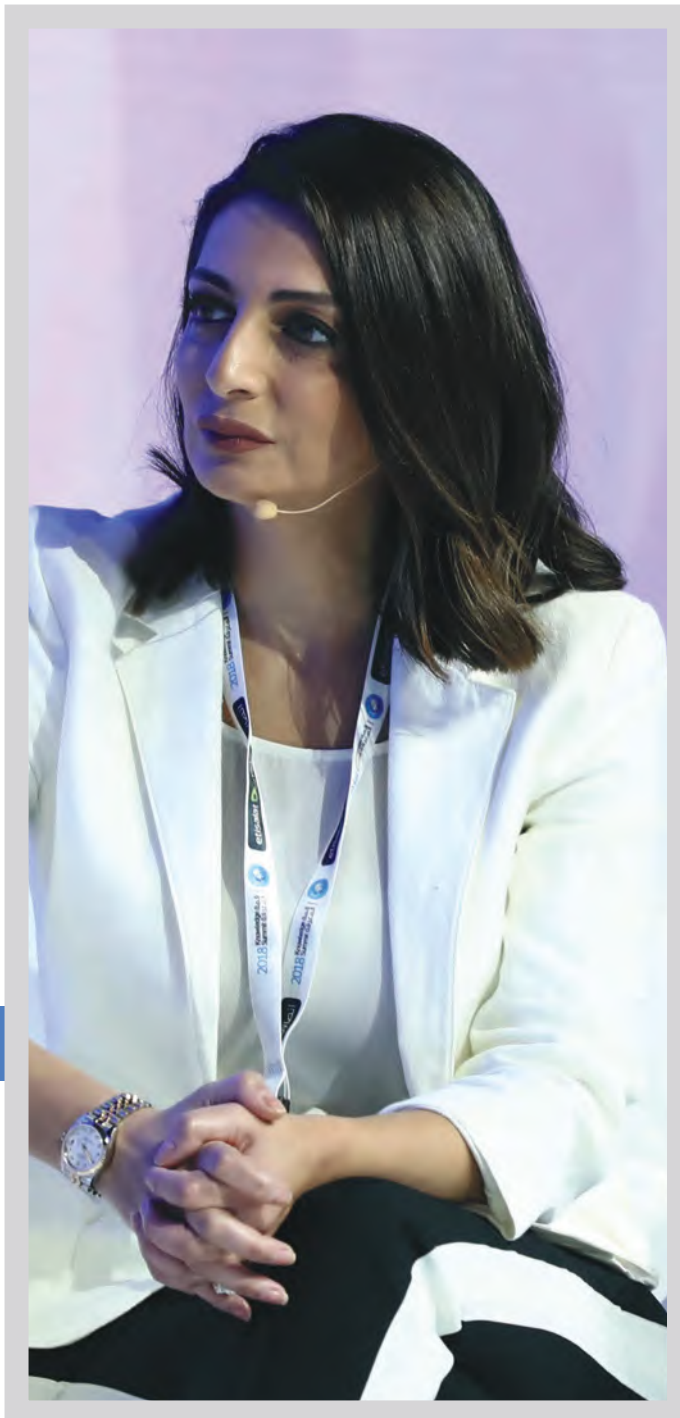




# قمة المعرفة | Knowledge Summit







## Speakers

**H.E. Jamal Bin Huwareb**

CEO, MBRF

**Mr. Khaled Abdel Shafi**

Director, Regional Hub for Arab States, United Nations  
Development Programme

**Dr. Hany Torky**

Chief Technical Advisor, Arab Knowledge Project, United  
Nations Development Programme

## Moderator

**Mrs. Mayssoun Noueihed**

Presenter and Editor at Al Arabiya TV



**H.E. Jamal Bin Huwareb**

**CEO, MBRF**

His Excellency serves as a Cultural Advisor to the Government of Dubai. Since 2013, he has been managing the Mohammed bin Rashid Al Maktoum Knowledge Foundation (MBRF). In 2016, he was appointed as the Secretary General of the Mohammed Bin Rashid Al Maktoum Knowledge Award. H.E. Jamal Bin Huwareb also heads MBRF's board of advisors. Bin Huwareb is a board member at Dubai Media Incorporated, a UAE national historian and a pioneering man of letters.



**Mr. Khaled Abdel Shafi**

**Director, Regional Hub for Arab States,  
United Nations Development Programme**

He served as Chief Country Operations Division at UNDP 2014-2015, and headed the UNDP Gaza Office for many years. He also an expert at political and socio-economic analysis and advice, program and operations planning and management and management oversight.



**Dr. Hany Torky**

**Chief Technical Advisor, Arab Knowledge  
Project, United Nations Development  
Programme**

He holds a PhD in Applied Statistics from Alexandria University in Egypt. Prior to joining the Arab Knowledge Project in 2010, Hany was a lecturer at Alexandria University. He has around 20 years of experience in the areas of Statistics and Knowledge for Development. He is currently the Chief Technical Advisor of the Arab Knowledge Project (AKP).



2018 Knowledge Summit  
القمة المعرفة 2018



**Moderator:**

H.E. Jamal Bin Huwaireb, can you give us a brief about the Knowledge Index, and this summit?



**H.E. Jamal Bin Huwaireb:**

Since its inception, the Summit has changed many concepts within five years, and instilled the knowledge concept in all its forms and aspects in UAE and the rest of the Arab world. We have been issuing knowledge reports and indicators, and holding many workshops and seminars on knowledge and the ways of its importation, production and exportation. Over the past years, the Knowledge Summit proved that the Arabs could return to lead the world as the nation of knowledge, as they were in the past. The best example of this is the United Arab Emirates and its distinguished achievements in the field of knowledge. When we released the Arab Knowledge Index, the United Arab Emirates was at the top of Arab countries. For the first time, when we wanted to release the

Global Knowledge Index of 131 countries, the UAE was ranked twenty-fifth.

UAE's wise leadership transformed the knowledge concept into clear strategies, as the UAE was planning for 2071. It must be a long-term strategy to know where we stand in 2050 and in 2070. We started with UNDP and the Future of Knowledge Foresight Report. When I saw UAE in this report occupying high places in the future, I recognized that this wise leadership and the people of UAE are determined to be at the top of the knowledge countries, lead the field of knowledge economy and produce and export knowledge. There is no better evidence than the Global Knowledge Index in its second edition, which ranked the United Arab Emirates in the nineteenth place. HH Sheikh Mohammed Bin Rashid Al Maktoum, UAE Vice President and Prime Minister and Ruler of Dubai -May Allah protect him- said: I do not want just one Dubai, but I want 200 examples of Dubai in the Arab world opening their arms to all. UAE wants to see the whole Arab world at the same level, and competing at the same levels of knowledge.

**It is the first time in the history  
of the United Nations to honor  
the Mohammed Bin Rashid Al  
Maktoum Knowledge Foundation  
as a global knowledge partner.**





#### Mr. Khaled Abdel Shafi:

The MBRF was honored by being a global knowledge partner to the United Nations. The partnership began ten years ago, while we were releasing the Arab Knowledge Report, then we moved to launch the Arab Knowledge Index, then we launched the Global Index at the global level, and this year we are pleased to issue three reports:

**First**, the Global Knowledge Index 2018 report.

**Second**, the analysis of the Knowledge Index 2017.

**Third**, the Knowledge Foresight Report, which is new. We are pleased that the focus of this Summit is on young people entrusted with achieving the 2030 Agenda for Sustainable Development and its 17 goals.



#### Moderator:

What is the importance of UN honoring? To what extent does it impose responsibility on your shoulders to maintain your position?



#### H.E. Jamal Bin Huwaireb:

We received an invitation from the United Nations to visit New York to honor the Mohammed Bin Rashid Al Maktoum Foundation to mark the 10th anniversary of our unique partnership with the UNDP. It is the first time in the history of the United Nations to honor the Mohammed Bin Rashid Al Maktoum Knowledge Foundation as a global knowledge partner. We are trying to help disseminate science and technology, and provide indicators and reports to make the decision-maker as close as possible to the truth and reality.



#### Moderator:

Can you tell us more about the results of the Knowledge Index 2018?



**Ten years of our unique  
partnership with the  
UNDP.**





**Dr. Hany Torky:**

In respect of the Global Knowledge Index, there are three sub-indices of education; and this is intentional? Because each of the three sectors of education (pre-university education, technical education and higher education) has its own characteristics. We aim to show the characteristics of each sector separately in order to show the strengths and weaknesses of each sector, and build the remaining sectors on that foundation. Without education, there is no scientific research,

innovation, technology, or knowledge economy. As for the Index results, last year we started with 130 countries and this year we reached 134 countries, and we hope in the future to become 195 countries to cover all countries of the world. The UAE jumped 6 places in the Index because it worked with all sectors in a balanced manner.



**Moderator:**

Let us talk about the knowledge gap in Arab and world countries.



#### Mr. Khaled Abdel Shafi:

The gap is huge, with some exceptions for the UAE and a few other countries, due to:

- Education Quality, where the Index identified a gap in education indicators.
- Research, development and innovation in the Arab world are declining, compared to other countries.
- Youth participation in knowledge production.
- Lack of data in the Arab world, like the remaining countries.



#### Moderator:

What are the outcomes and expectations of this summit, and what is next?

“Without education, there is no scientific research, innovation, technology, or knowledge economy.”



#### H.E. Jamal Bin Huwareb:

In 2014, when the summit was launched, we were sought to promote the concept of knowledge in the UAE and the Arab world, but after three summits, we witnessed a manifest change. The summit turned into an Arab and global joint action attended by experts from all over the world. In addition, it presents reports, indicators and studies of current situations of knowledge, and how the next phase will be. We, in Dubai and in the UAE, would like to offer help to the UAE and its people, as well as the entire Arab world. We want to compete with them in knowledge and we would like to hold this summit every year to maintain the summit march.



#### Moderator:

What are the most notable results of the Knowledge Index?







**Dr. Hany Torky:**

As for the Future Foresight Report, we should have changed and not depended only on the Knowledge Index that measures the past and the present, whereas the technological change is very significant. We have to look at the future and provide information and reports to decision-makers. We have analyzed

the points of strength and weakness in 20 countries and found that seven of them will lead the world in the knowledge field. We are proud of the UAE as one of these countries.



**H.E. Jamal Bin Huwaireb:**

The report is available on [knowledge4all.com](http://knowledge4all.com), in Arabic and in English «The Future of Knowledge: A Foresight Report 2018».



**Moderator:**

How can we use this Index to build knowledge societies?



**Mr. Khaled Abdel Shafi:**

The Index is important to analyze the state of knowledge in each country based on seven indicators, through which decision-makers can determine the points of strength and weakness in any country and how to improve these indicators. We are in the Mohammed Bin Rashid Al Maktoum Knowledge Foundation and the United Nations Development Program not only releases this report, but we also transfer expertise and experience.



**Moderator:**

Is there anything you want to explain to us, any information about this summit you would like to add, or future projects you want to tell us about?



**H.E. Jamal Bin Huwaireb:**

The Arab Knowledge Project in partnership with UNDP is a pilot project. We want to strengthen this partnership with the United Nations in more projects and initiatives. The wise leadership puts us on top of all global indicators. HH Sheikh Mohammed Bin Rashid Al Maktoum -may Allah protect him- established the Mohammed Bin Rashid Al Maktoum Knowledge Foundation for the benefit of mankind, the Arab world, Muslims and humanity in general.

**Attendees' Questions**

**One of the attendees:**

First question, how to maintain this success?

Second question, is there a plan for the development of work in scientific research and researchers?



**H.E. Jamal Bin Huwaireb:**

For the first question, federal and local governments are developing plans for 2071. The progress you are







witnessing today is in the Knowledge Index only as we are at the top of 50 other indicators. When you look at significant progress in the UAE, you realize that there are successful clear plans.

For your second question, there is a plan and a clear strategy for funding the research centers. The Mohammed Bin Rashid Al Maktoum Knowledge Foundation is supportive of research centers, and we want to establish big research centers.

**One of the attendees:**

What is the reason for not making some information available?



**Dr. Hany Torky:**

We take our information from international organi-

zations which take their data from governments and officials, but the problem is that some countries do not deliver their data to international organizations or they deliver it late; therefore, the data of those countries is missing.

**One of the attendees:**

How to achieve creativity and reach top ranks in the Arab World index or the Global Index?



**Mr. Khaled Abdel Shafi:**

Quality of education gives the young generation freedom of thinking, innovation and creativity. In addition, it will put us -in the Arab countries- in a better position than we stand now.





#### H.E. Jamal Bin Huwaireb:

I want to add enabling environments, where many Arab countries have a problem in enabling environments, and they must work to bridge the gap between them and the rest of the world.

#### One of the attendees:

What are the pillars on which the Pre-university Education Index stands?



#### Dr. Hany Torky:

When we measured the education sectors in the Index, we did not care about the quantity or expenditure, but about quality. In addition, there is an important piece of information which is: spending on education percentage in the Arab world is equal to that in all the developed countries, but the process-

es of education in general and the outputs of education are facing a problem.

#### One of the attendees:

How can we eradicate illiteracy and support the Arab countries to walk hand in hand with the countries that are advanced in knowledge?



#### H.E. Jamal Bin Huwaireb:

We are working through the Literacy Initiative, inspired by HH Sheikh Mohammed Bin Rashid Al Maktoum initiative, which he launched last year to remove the literacy of 30 million young people in the Arab world by 2030, at the same time, we are working on removing IT illiteracy.



**Quality of education  
gives the young  
generation freedom of  
thinking, innovation and  
creativity.**





## Day 2

# Knowledge Arena

### Session 2

## The Egyptian Model for Education Development

### Topics

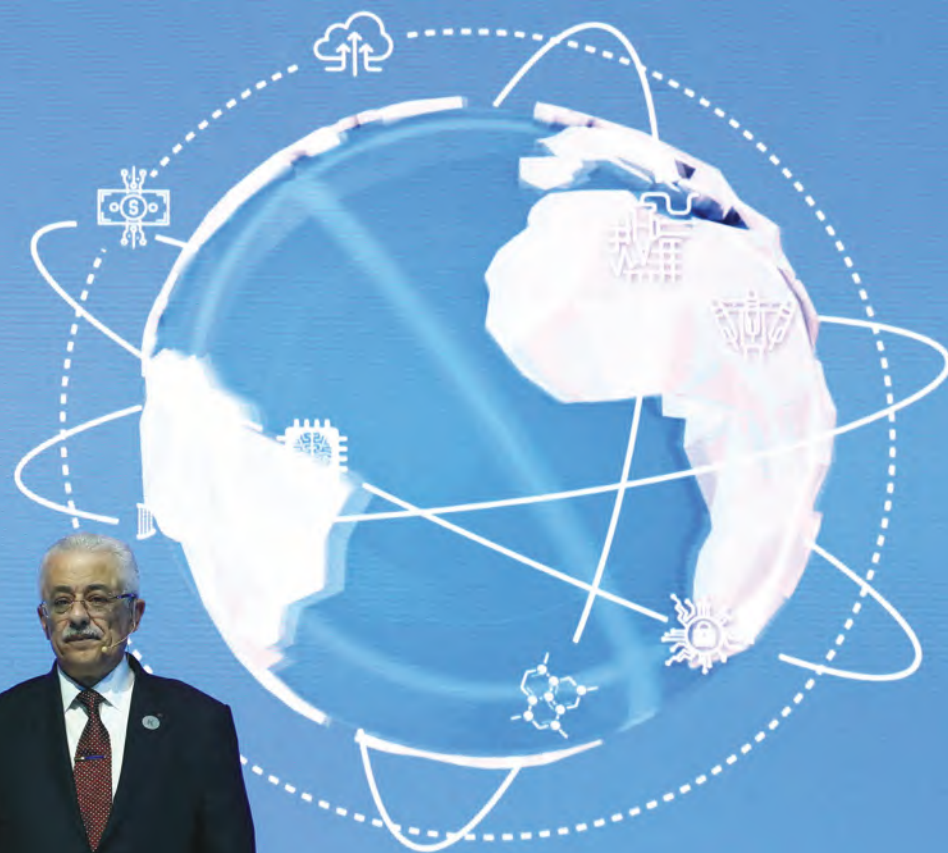
- Developing pre-university education from kindergarten to high school.
- Developing higher education and linking it to the Egyptian and international labor market.

# 2018 s

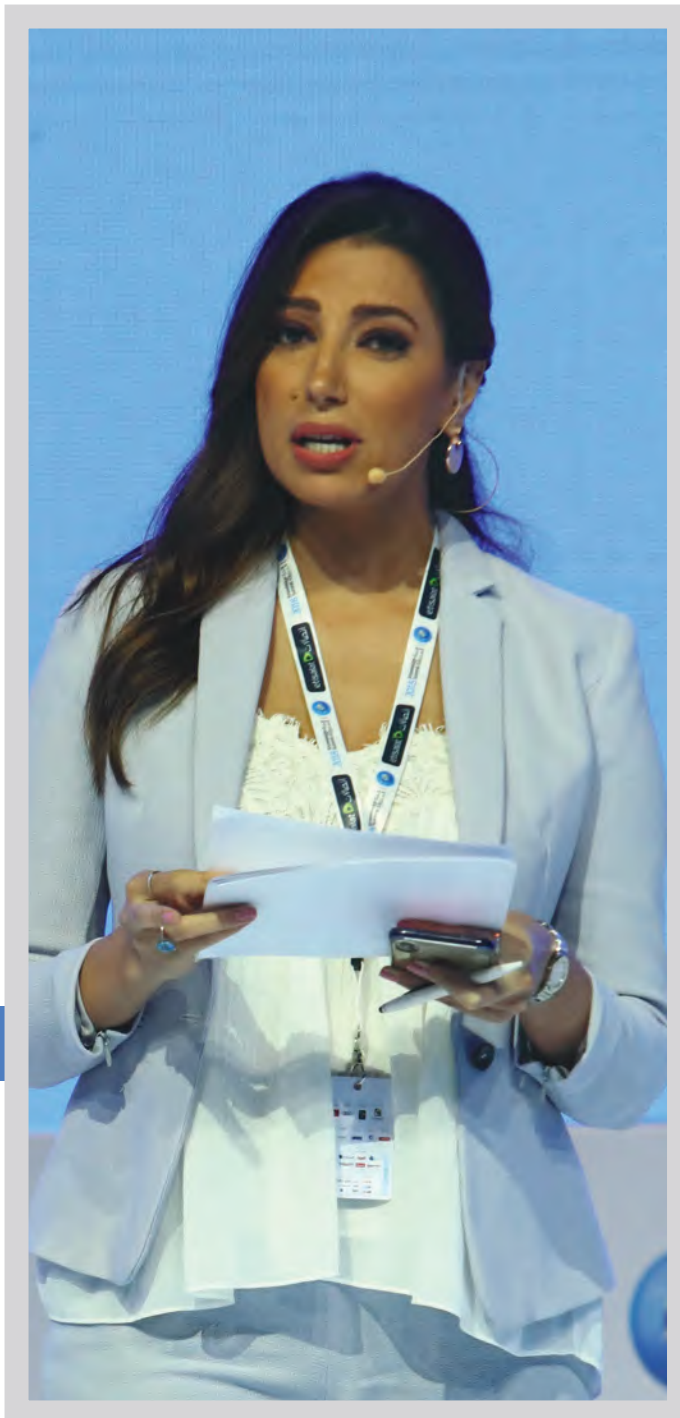




# قمة المعرفة | Knowledge Summit







## Speakers

**Prof. Tarek Shawki**

Minister of Education & Technical Education, Egypt

**Prof. Khaled Atef Abdel-Ghaffar**

Minister of Higher Education & Scientific Research,  
Egypt

## Moderator

**Mrs. Doha Alzohairy**

Journalist and Presenter at Al Arabiya TV



**Prof. Tarek Shawki**

**Minister of Education & Technical Education, Egypt**

A professor of Mechanical Engineering at the American University in Cairo. He worked as a researcher and professor of theoretical and applied mechanics at the University of Illinois. He has a PhD and Master of Science in engineering, Master of Science in applied mathematics from Brown University, and a Bachelor of Science in mechanical engineering from Cairo University.



**Prof. Khaled Atef Abdel-Ghaffar**

**Minister of Higher Education & Scientific Research, Egypt**

He headed the Department of Oral Medicine, Gum, Diagnosis and Radiology at the Faculty of Dentistry, Ain Shams University (2009 to 2015) and served as Dean of Dentistry in Ain Shams (2014). He has been awarded the State Encouragement Prize in Medical Sciences; he also received other accolades including IADR Edward Hatton Award for Best Research in Seattle Washington, USA, in addition to other awards.



2018 Knowledge Summit  
المعرفة قمة 2018



**Moderator:**

Let's welcome my respected guests: Prof. Tarek Shawki, Minister of Education and Technical Education, to know closely about the new educational mechanism, and also Prof. Khaled Atef Abdel-Ghaffar, Minister of Higher Education & Scientific Research, to have an idea about the latest developments in higher education and linking it to the Egyptian labor market.



**Prof. Khaled Atef Abdel-Ghaffar:**

I will try to clarify Egypt's vision for education in the coming years, and the interest of the country regarding that field. Even though the responsibility is not easy, the vision is clear.



**Moderator:**

What about you, Dr. Shawki?



**Prof. Tarek Shawki:**

We will try to review our educational vision from kindergarten to the labor market.



**Moderator:**

Then, let's start talking about this vision with Dr. Khaled.



**Prof. Khaled Atef Abdel-Ghaffar:**

We quite recognize that the development of education in Egypt is not merely development of facilities; rather, this initiative focuses on the development of ideas and curriculum, to ensure that the graduates will have a clear vision and qualified for the coming era and the future. Hence, we are talking about basic literacy, such as science and ICT skills, financial, cultural and civic literacy, in addition to providing the students with the competitive labor market skills, such as critical thinking, innovation, communication and collaboration skills.



This approach aims to equip the graduates with the spirit of curiosity, dreaming, creativity, passion for knowledge, initiation, persistence, leadership and the ability to adapt to cultural and social activities. Now Prof. Tarek will tell us how he can give me basic education graduates so that I can develop their skills and competencies to be able to meet the challenges of the labor market when they graduate.



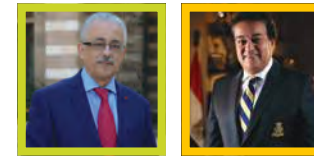
**Moderator:**

What you have mentioned is based on what Prof. Tarek will say, because those who graduate from basic education go to university and then to the labor market.



**Prof. Khaled Atef Abdel-Ghaffar:**

Sure, it is impossible to make a change in any system without full coherence and coordination between what is provided at the primary stage and what is provided at the university.



**Moderator:**

Then, qualification means the preparation of students, teachers, and infrastructure; what will you do regarding these complicated things after having accumulated in Egypt?



**Prof. Tarek Shawki:**

We wanted to create an entirely new educational system. We called our new educational system «Education 2.0», like Finland. While we build the future, we have to improve the present, as there are still people who use this dilapidated system. In one year, we created a completely new system, and applied it to kindergarten and the first grade in September 2018. We are also trying to change the concept of secondary school exams through two projects: the first project is to develop a new system from scratch, and we will be waiting for the results by 2030. However, the second one is to prepare for canceling the General Secondary Education exam, which constitutes an exit

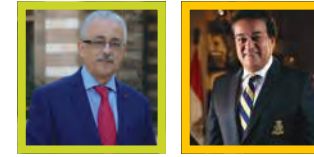




examination, to replace it with a cumulative system. In the new system, we began to imagine the skills required after 15 years, how these students will work in a completely different world and how the shape of new teachers will be. Therefore, we are currently cooperating with the colleges of education and with Prof. Khaled in order to provide the qualified teacher that we want in the new system, to transform the curriculum from a complex shallow curriculum to an interactive curriculum, and move from memorization to active education, and from separate subjects to interdisciplinary ones.

Our view of the primary education stage is that it will not contain any subjects, but it will contain interdisciplinary subjects, in addition to language and religion. Moreover, we will integrate science, mathematics, his-

tory and geography subjects in the new system. However, in the preparatory stage, we will retrieve some subjects, but they will be based on the idea of choice. Regarding the secondary stage, there will be science, technology, humanities, arts and personal and social education groups. In addition, there will be four compulsory subjects and four optional subjects. The new system is different from the old system that divides students into two branches: arts and science. However, we have completely changed this system, so you will find topics such as robotics, design and programming, in addition to new subjects that have never existed before.



**Prof. Khaled Atef Abdel-Ghaffar:**

All these skills are associated with what we call the Fourth Industrial Revolution; i.e. artificial intelligence, robotics, and self-driving vehicles, etc. We need to prepare and teach students these subjects early in the primary education stage.



**Prof. Tarek Shawki:**

You are quite right. We have considered this during the design of the secondary and pre-secondary system; to early discover gifted students and send them to higher education while they are fully aware of their talents.



**Prof. Khaled Atef Abdel-Ghaffar:**

This point is really important, because the most developed countries with regard to the Knowledge Indicators are those countries that were able to discover talents during the study period.



**Prof. Tarek Shawki:**

This point is really important, because the most developed countries with regard to the Knowledge Indicators are those countries that were able to discover talents during the study period.

In addition, we developed frameworks for the curriculum, and cooperated with those entities in preparing the curricula, to make sure that the quality matches global standards.

What I want to say is that the new system named Education 2.0 is an education system that basically focuses on the learner and that education is for life, not for the exam; this is the key point.



**Moderator:**

Education is for life and not only to pass tests, how can the new educational vision get over the dilemma of Coordination (Liaison) Office for University Admissions, and the idea of high-ranked colleges, and take into account needs of the labor market?







**Prof. Tarek Shawki:**

The biggest obstacle is the deep-rooted culture in the consciousness of the Egyptian people about that. However, we work together to convince parents that both things - entering the university and discovering talent - can be done simultaneously.



**Prof. Khaled Atef Abdel-Ghaffar:**

Moreover, the new examination system is concerned with critical thinking, innovation and knowledge, not memorizing.



**Prof. Tarek Shawki:**

In the new system, we canceled exams in the first 4 years with the help of (the Center for Curriculum and Educational Materials Development), Discovery, Encyclopedia Britannica, Longman, York Press and Nahdet Misr. In addition, it is the same system in Finland. Moreover, regarding teachers, we trained about

130,000 teachers in summer before school. Furthermore, there is a new training course every two months throughout the year. However, the first year of secondary school caused a greater social panic than primary education.



**Moderator:**

Is it one year, two or three? Will the result of the test be estimated only from the first year or both years together?



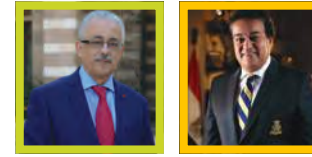
**Prof. Tarek Shawki:**

The exam will be over the three years; each year 4 exams i.e. 12 exams. We will take the best 6 results, and it will be open book exams.



**Moderator:**

However, this new vision requires strong infrastructure!



**Prof. Tarek Shawki:**

The state has invested billions of pounds in infrastructure of schools. Every school has been equipped with Fiber Optics, high-speed Internet, local network and Wi-Fi in order to conduct online exams



**Prof. Tarek Shawki:**

No, we have explained the system to them and told them that these potentials will be available to the rich and the poor. In short, we are working hard to build educational subjects and train teachers, since we have hundreds of thousands of teachers.



**Moderator:**

Was this a source of anxiety for parents?



**The state has invested billions of pounds in infrastructure of schools.**





**Moderator:**

This is a huge number!



**Prof. Tarek Shawki:**

The number of teachers is huge, their economic and social conditions need improvement, and they need modern training methods.



**Moderator:**

Because it is they who will implement the new educational vision.



**Prof. Tarek Shawki:**

Of course.



**Moderator:**

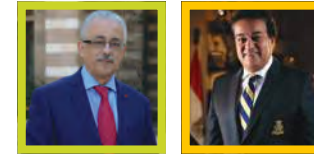
Are there places for all new generations in Egyptian universities? Are there new disciplines for them in colleges?



**Prof. Khaled Atef Abdel-Ghaffar:**

Certainly, there are places in many disciplines.





#### **Moderator:**

The labor market has changed and its requirements have changed.



#### **Prof. Khaled Atef Abdel-Ghaffar:**

That's right. There is fear of the Fourth Industrial Revolution where about 35% of jobs will disappear. However, there is no need to fear, because there are other jobs that will appear, which will be required in the future. We have developed future career programs in our new system.

#### **Attendees' Questions**

##### **One of the attendees:**

Dr. Tarek: How can the student select sources from the Knowledge Bank in the presence of huge sources? To Dr. Khaled: How can you overcome the challenges and problems that may face sector committees and the creation of new programs, how can you overcome these challenges and problems?

##### **One of the attendees:**

Is there an alternative approach to formal learning for children?



#### **Prof. Tarek Shawki:**

As for the sources of Knowledge Bank, we have developed a map that links the content and curricula to facilitate the search process.



#### **Prof. Khaled Atef Abdel-Ghaffar:**

With regard to challenges that lie ahead, we have changed all Sector Committees across the country-24 committees. We have assigned a new task to the Sector Committees to evaluate the current curricula in all private and governmental universities, and review them every five years to keep up with the global system.

**“However, there is no need to fear, because there are other jobs that will appear, which will be required in the future.”**



# 18 Knowledge قمة المعرفة Summit



## New Initiatives



### H.E. Jamal Bin Huwaireb:

We have an announcement about a leading digital library, the Saudi Digital Library (SDL), which won the Mohammed Bin Rashid Al Maktoum Knowledge Award yesterday. It deserves this honoring because it has worked very hard in the past period with the efforts of Dr. Saud Al Salahi, Director General of Saudi Digital Library. SDL has become one of the knowledge resources in the Kingdom of Saudi Arabia. Furthermore, there is another Arab effort led by Prof. Tarek Shawki, Minister of Education, to enrich knowledge content in the Arab Republic of Egypt; the Knowledge Bank. Moreover, a new effort has been added to their efforts; the Dubai Digital Library, which is one of the MBRF projects and initiatives to support the Arabic content. It is an open library for the whole world. Through the Knowledge Summit 2018, we want to announce that we are preparing for the first Digital Arab Union between the Saudi Digital Library, the Egyptian Knowledge Bank and the Dubai Digital Library. Moreover, we invite all Arabic digital libraries that have high quality and specifications in this field to join us in this Union, as we are now announcing the preparation of this Union to serve the Arabic content all over the world.



### Dr. Saud Al Salahi:

The Saudi Digital Library is a huge institution with more than 200 million sources of information! Moreover, there are more than 6 million users of SDL including academics, Faculty members, university associates, teachers and students.



### Prof. Tarek Shawki:

This union is a long-awaited dream.



### H.E. Jamal Bin Huwaireb:

This Digital Union will be the largest digital union in the Arab world, and will provide a major addition to all universities and researchers. When we talk about youth and the future of the knowledge economy, this is the biggest supportive source for youth and the future of knowledge economy.







## Day 2

# Knowledge Arena

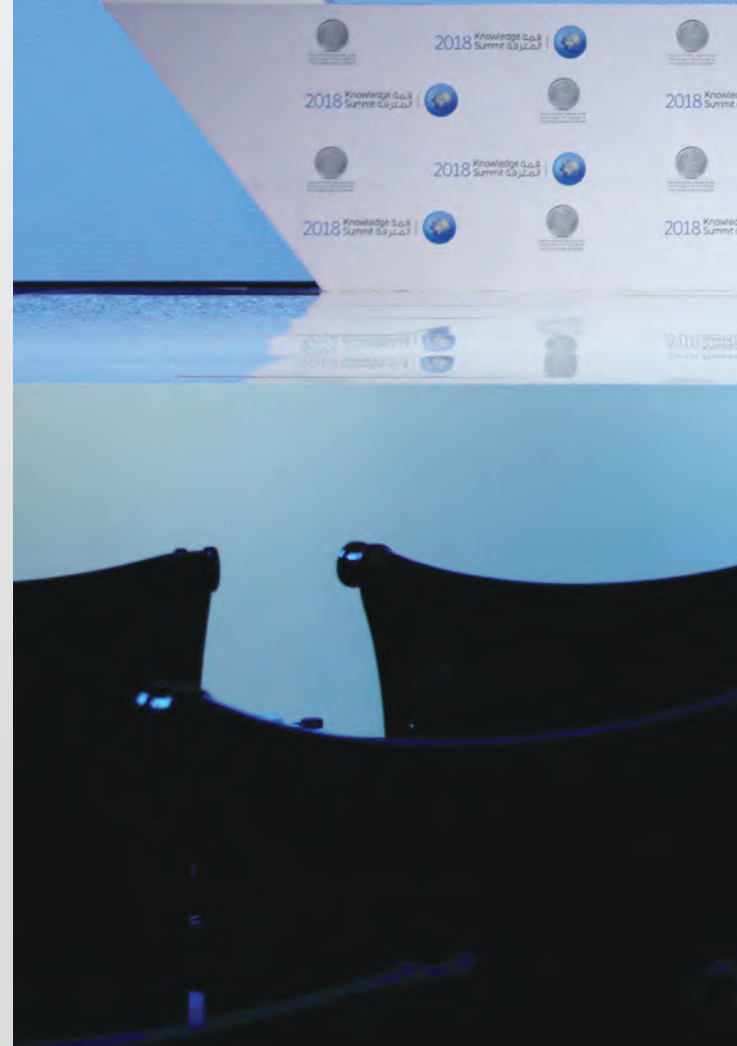
### Session 3

## Knowledge Economy in Future Cities

### Topics

- Information, Technology & Creativity: Elements of Production in the Knowledge Economy.
- Future Cities and Creative Economy.
- Knowledge Competitiveness between Future Cities.
- Decline of Traditional Services and the Upsurge of Knowledge Services.

# 2018





# قمة المعرفة Knowledge Summit







## Speakers

**Prof. Dr. Boris Cizelj**

President of Knowledge Economy Network

**Mr. Adam Greenfield**

Urbanist and Author

**Dr. Raed Safadi**

Chief Economic Advisor – DED

## Moderator

**Mrs. Youmna Naufal**

TV Program Creator & Correspondent

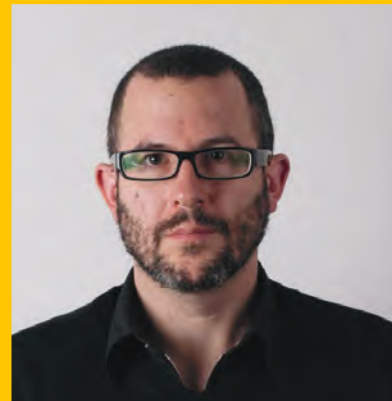




**Prof. Dr. Boris Cizelj**

**President of Knowledge Economy Network**

He is a Senior Advisor at the Slovenian Innovation Hub. He is a holder of MSc in Development Studies at the Institute of Social Studies and PhD on Regional Integration Processes among Developing Countries. He is the Founder and Director of the Research Centre on Developing Countries, and worked as a Dean of DOBA Business School.



**Mr. Adam Greenfield**

**Founder of Urbanscale**

He is an American writer and world-renowned urbanist. After stints as Lead Information Architect for Razorfish in Tokyo and Head of Design Direction for service and user-interface design at Nokia's headquarters just outside Helsinki. Author of the groundbreaking «Everywhere: The Dawning Age of Ubiquitous Computing», and his most recent book was titled «Radical Technologies: The Design of Everyday Life».



**Dr. Raed Safadi**

**Chief Economic Advisor - DED**

Dr. Raed leads a team of experts entrusted with the implementation of Dubai's Strategic Plan 2021, and promoting the diversification and sustainable growth of Dubai. He is a leading expert on development economics. He holds a PhD in Economics from Georgetown University. Dr. Raed has previously worked for the OECD and the World Bank.





**Moderator:**

What is the definition of knowledge economy?



**Mr. Adam Greenfield:**

I do not use the term «knowledge economy» in my works! I do not think that there is a separate term called «Knowledge Economy». There is no longer industry that works without some kind of intelligence! Moreover, I do not think that any global economic activity can continue in the world without using the cognitive aspect or «Knowledge Economy» as one of its components.



**Moderator:**

Dr. Boris, how do you recognize the knowledge economy?



**Prof. Dr. Boris Cizelj:**

I completely agree with Mr. Greenfield that there is no economy in the world that we can call a knowledge economy one hundred percent. Moreover, there is no economy that does not rely on knowledge, as it is an integrated process.



**Moderator:**

Dr. Raed, you worked intensively on developing Dubai and its transformation to the knowledge economy era. Would you tell us about this experience?



**Dr. Raed Safadi:**

Let me start by answering your first question. There is a major difference between the definition of traditional economy and knowledge economy. While we study economics, there is a focus on scarce resources, as

well as how societies use and distribute these resources. When we talk about the labor shortage, and scarcity of capital, land, or even natural resources, we think about new ways that relate to the knowledge economy.

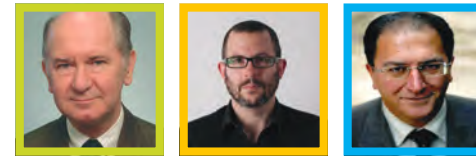
In addition, instead of the inability to get any goods or services, I can get a lot if I use that knowledge that is used by others, too. Knowledge is cumulative and learned. If we are convinced of this idea, we will study the ways of creating an integrated system enhancing knowledge economy. This is what happened generally in Dubai and UAE. We succeeded in having a knowledge economy based on stimulating individuals, companies and organizations to create the creativity and innovation culture. In addition, governments played an important role in leading this system.



#### Moderator:

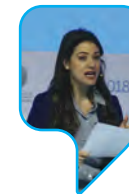
How do we prepare youth to meet the needs and requirements of knowledge economy?

“There are other values that are related to balance, justice and beauty, and are not related to financial benefits.”



#### Prof. Dr. Boris Cizelj:

Many countries worldwide are still unable to completely reorganize and modernize the educational system. When we talk about post-secondary education, the focus must be directed to the soft skills, i.e. teamwork capabilities, critical mentality and the like.



#### Moderator:

Would you tell us about the soft skills and the coming generations' future?



#### Mr. Adam Greenfield:

Sure! I'd like to direct attention to critical thinking skills and its flexible applicability to our ideas, as we need to learn and understand how to do so, and how to accept criticism.





# 2018 قمة المعرفة Knowledge Summit



## **Moderator:**

What is the importance of soft skills learning for future generations? How do we proceed in changing the way of thinking of education?



## **Dr. Raed Safadi:**

We cannot predict the future, but we can shape it. However, how do we build the Future? We shall start today and begin with education. If we study the innovation strategy, we will find seven sectors, and education is in the first rank, then energy, water, technology

and transport. We do not want to consider knowledge in vain because it shall be localized in society. We have to create a unified platform, incorporating system, society, culture and a legislative system.



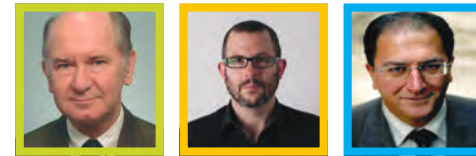
**Moderator:**

How can we integrate our traditional education into this transformation towards the future?



**Mr. Adam Greenfield:**

I think that we will move towards the problem of dealing with knowledge in its rigid sense. Knowledge consists of two parts, acquired knowledge resulting from the human interaction with the environment, and an inherited knowledge that exists in the actual and realistic world. When we are thinking that this knowledge can be decontextualized, to deal with it as a rigid concept that can be converted to electronic encryption in order to be conveyed to different places and environments, we will face the risk of deep misunderstanding of knowledge.



**Prof. Dr. Boris Cizelj:**

Intelligence, cognitive ability, and the ways by which people express themselves to others, communicate with each other, and feelings – all these are human components, so I think there is no need to fear artificial intelligence. It is just a tool. If we organize ourselves and deal with it appropriately in society, it will help us become better humans than before, and respect the principles of unity and social solidarity more and more.



**Dr. Raed Safadi:**

We must create an ecosystem that corresponds to the knowledge economy system. We all bear this responsibility, which starts with conveying knowledge culture as a very important factor in creating knowledge economy.





**Moderator:**

As we belong to the Millennial Generation, how do we meet the challenges of the future?



**Dr. Raed Safadi:**

You use the term «challenges». However, I can use the term «opportunities». We just have to try new things and innovate new products.



**Moderator:**

Therefore, I want to change the term challenges to opportunities.



**Mr. Adam Greenfield:**

We need to develop a social technology generation to ensure that the entire core of highly advanced technology, i.e. algorithms and machine learning, is designed in a human-friendly way.



**Dr. Raed Safadi:**

There are some investors, who have already invested in skills, and their knowledge has been transferred from Detroit to Silicon Valley. We hope the knowledge will be conveyed from the Silicon Valley to Dubai or Abu Dhabi.



**Prof. Dr. Boris Cizelj:**

When we talk about skills, we will find that there is a



big difference between countries, whose governments are aware of the recent rapid trends, and direct these trends to the right path.



**Dr. Raed Safadi:**

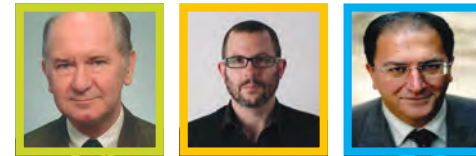
UAE is the first country to hire a minister for artificial intelligence. It is all about awareness, as the main goal is to build a motivating knowledge culture.



**Moderator:**

Dr. Boris, we talked about the basic achievements of knowledge economy and entrepreneurship in the labor market. What do you think about that?

“ **Entrepreneurship is associated with forming a trend that relates to the existence of an innovative methodology.** ”



**Prof. Dr. Boris Cizelj:**

We have to teach children the entrepreneurship culture, even in the official education, as it shall be integrated into the curricula. If we succeeded in teaching our children the culture of reliable entrepreneurship development, at an early age, we will have a paved way to the knowledge economy era.

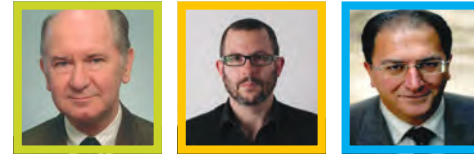


**Mr. Adam Greenfield:**

Our perception of the entrepreneurship concept is very limited. It is tragic that everyone should start establishing a company, aware of programming or recognize the ways of having a social network! To be clearer, there are other values that are related to balance, justice and beauty, and are not related to financial benefits, this is what we found in the entrepreneurship literature.







**Moderator:**

What can you add to make things clearer?



**Mr. Adam Greenfield:**

I think we started understanding creativity as an economically valuable element, but things that add meaning and context to our lives have not any economic value.

There are things that are related to human moments. If we do not start from this understanding, I think we will leave something very important outside the human equation.



**Moderator:**

Mr. Raed Safadi, as an economic consultant, do you like to add something or have a comment on this subject?



**Dr. Raed Safadi:**

I just want to have tangible things, so that I can develop the policies and ways of utilizing knowledge. Therefore, whether you create or use knowledge, it will identify your project's investment return values and lifelong learning. The concept that I mean is to invest in yourself.



**Moderator:**

Dr. Boris, do you have any notes about that?



**Prof. Dr. Boris Cizelj:**

Entrepreneurship is associated with forming a trend that relates to the existence of an innovative methodology. Any person can be an entrepreneur without establishing a company, as he can be an entrepreneur in any other field, in another company, or in any





non-governmental organization. He may be an entrepreneur among his/her family.



**Moderator:**

Are you satisfied with this definition now or have things changed?



**Mr. Adam Greenfield:**

I am not using the term «entrepreneurship» because it is often easily confused with this limited identity. I think many of the great things that we refer to, such as human creativity and innovation, and the most part of the young people's understanding of entrepreneurship are not covered by this term.

**Attendees' Questions**

**One of the attendees:**

How can your generation give us an optimistic approach? As for jobs and artificial intelligence, I am afraid to graduate from university without finding a job! What can I do?



**Prof. Dr. Boris Cizelj:**

Do you know who leads the change throughout history? They are young people. It is a part of my answer. Today, you can express your views to governments and authorities in a way that is more accessible than the past, which is not fully used.



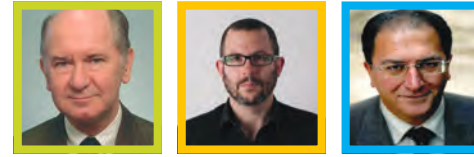
**Mr. Adam Greenfield:**

You need to develop the skills of strength, rigidity, independence and self-containment, so as to be able to adapt quickly and shortly to the changing circumstances.



**Moderator:**

How can we reduce the new generations' anxiety, as you all agree on the difficulty of getting jobs?



#### Dr. Raed Safadi:

Do not believe anyone who tells you that he can predict the future, as I said we could not predict the future, however, we can build it. You can change the future.

#### One of the attendees:

Should there be organizational and governmental support for technology and knowledge?



#### Dr. Raed Safadi:

When you are in Dubai, try to notice the incomparable telecommunications infrastructure, either in relation to the digital or construction aspect. In addition, you should have a look at the soft infrastructure of the legislative framework that receives your ideas. Moreover, if these ideas are good and follow the government's strategy, they will be applied immediately! You will not have this ability to communicate with leaders in another place in the world! This engagement responds to opportunities that are in line with the Strategic Plan.





## Day 2

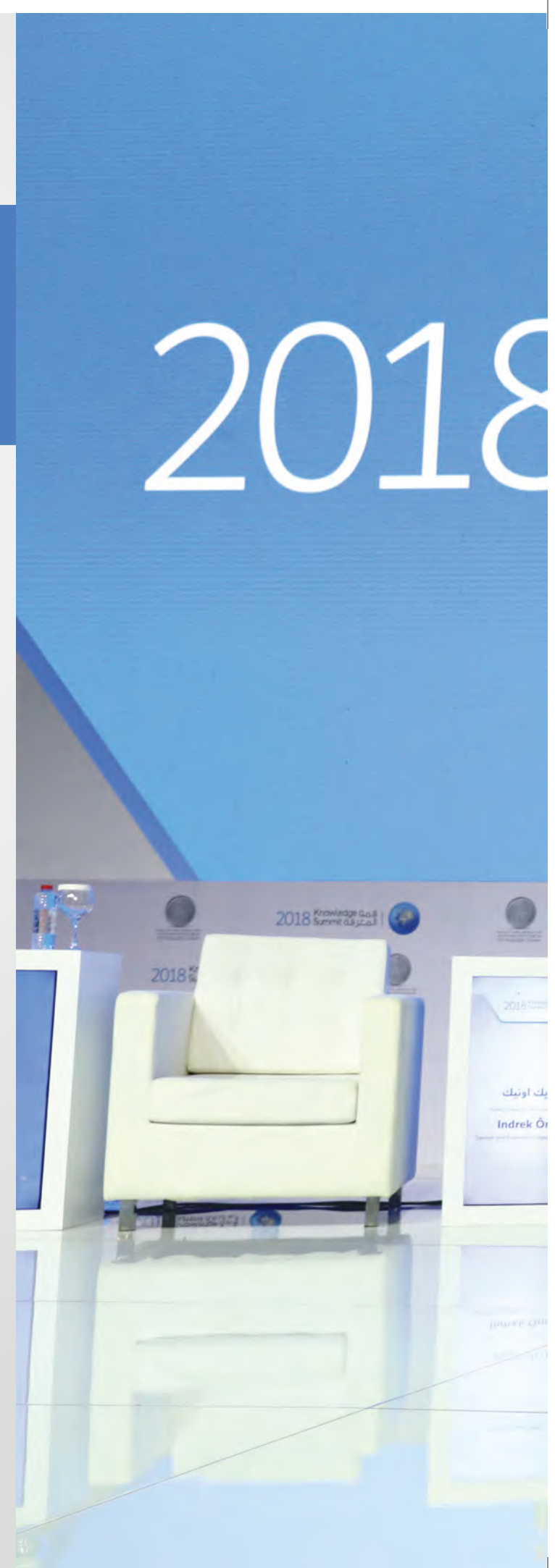
# Knowledge Arena

### Session 4

## Moving from Consuming Knowledge to Producing it

#### Topics

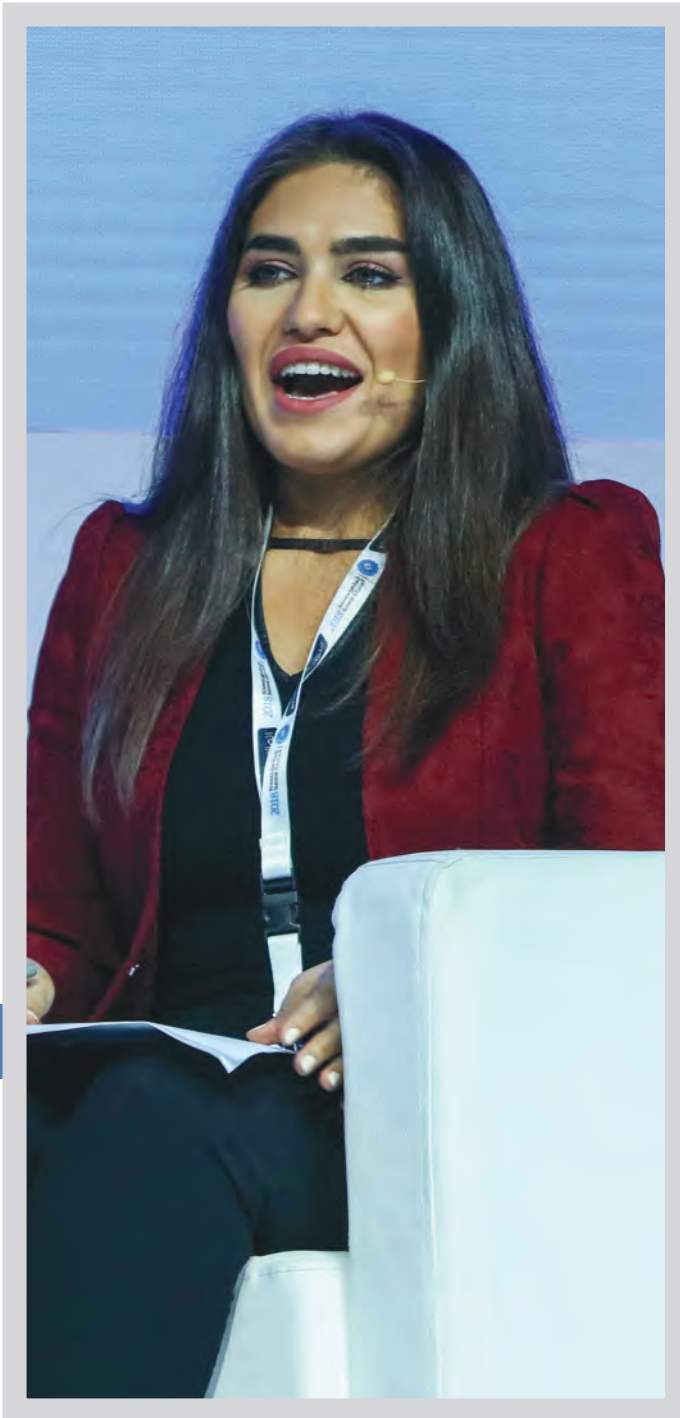
- The digital citizen in the era of artificial intelligence.
- Future jobs in the knowledge society.
- Skilled immigration and its impact on knowledge economy.
- The economics of artificial intelligence industry and their effect on the global economy.





# قمة المعرفة | Knowledge Summit





## Speakers

**Sheikha Noura Al Nuaimi**

Director of the Ajman X and the executive manager for  
Ajman Future Series Program

**Dr. Karim Sabbagh**

Chief Executive Officer of DarkMatter Group

**Mr. Indrek Õnnik**

Speaker and exposition engagement, e-Estonia

## Moderator

**Mrs. Hind Mustafa Moallem**

Journalist and Content Creator





**Sheikha Noura Al Nuaimi**

**Director of the Ajman X and the executive manager for Ajman Future Series Program**

She is the Director of Ajman X. She graduated with a Bachelor degree in Computer Science from the University of Sharjah in 2005, and obtained a Master's degree in International Business from the University of Wollongong in 2008. In the same year, she held several positions in the Municipality and Planning Department such as the Head of Systems Development.



**Mr. Indrek Õnnik**

**Speaker and exposition engagement, e-Estonia**

Indrek joined the e-Estonia team in 2016 and has become the main speaker. He obtained degrees in Economics and Business Administration, International Relations, Diplomacy, and European Studies. He has in-depth knowledge of international relations and economic process analysis.



**Dr. Karim Sabbagh**

**Chief Executive Officer of DarkMatter Group**

He has more than 30 years of experience running technology-centric global organizations. Karim holds a Master degree in Technology Management from Columbia University, a Doctorate in International Business Management from the International School of Management (Paris), MBA and BBA from the American University of Beirut.







**Moderator:**

What is a digital citizen?



**Dr. Karim Sabbagh:**

Digital citizenship empowers people digitally to use technology to interact with the society and the government, and to contribute to policy formulation.



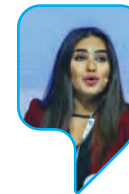
**Moderator:**

How can we define a digital citizen, specifically, in the artificial intelligence era?



**Mr. Indrek Önnik:**

In Estonia, people do not think about this issue. We are citizens, who use digital means in doing things. We do not perform different things in Estonia, but we do it differently. Governments will have better performance and less visible presence, as they will proactively serve people. Certainly, artificial intelligence will support this trend.



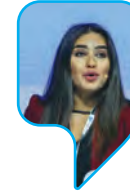
**Moderator:**

How do you promote interaction between citizens and government through artificial intelligence?  
How do both gain benefits?



**Sheikha Noura Al Nuaimi:**

The digital citizen is a citizen whose environment is shaped by technical means that helped him to perform different things. Ajman X experience resulted from the UAE's policy and the trend towards knowledge economy. Therefore, we focused on three pillars, namely, citizen, government, and the private sector, represented by technology companies. Now, it becomes Ajman X's role to prepare the digital citizen to use modern techniques and technology, by developing programs, initiatives and projects to increase awareness in this area. We launched the Future Chain Initiative and produced 32 projects. We did not launch ordinary initiatives. However, we implement future projects, and the third pillar in this regard is the information technology sector, i.e. IT companies in the private sector. It is very important to look for international or local companies that offer solutions to the UAE or Ajman. Then, we present these solutions to the governmental departments to choose the appropriate solution for us and adopt it for UAE nationals' benefit.



**Moderator:**

How does technology fundamentally change the State's concepts, and the interaction between the citizen and the State? What impact does this have on society?



**Mr. Indrek Önnik:**

It starts with the logic that pushes us towards digitization. Why did we start digitizing two decades ago? We have very limited financial and human resources, but the government wanted to provide services to everyone. However, actually, we have about one million persons and 45,000 km<sup>2</sup>! How can the State provide services to everyone, while population density is very low? Therefore, we thought to provide online digital services, and ensured that every inch in our country has access to the Internet. Digital services are cheaper for the government, and we think they should be cheaper for the end user as well.





The access to 99% of government services has become possible at any time. Digitization influences everything, government, Gross National Income, and standards of living.



**Moderator:**

What are the major future challenges that we will face concerning job automation?



**Dr. Karim Sabbagh:**

There are scientific predictions that indicate that 50% of today's work as professionals in any field will be automated, starting from now until 2030. According to these predictions, 15%-30% of current jobs will be replaced in the future, and about 3%-5% of the existing jobs will have no role.





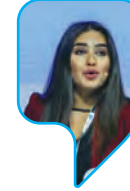
**Moderator:**

What are the governance challenges that you may face?



**Sheikha Noura Al Nuaimi:**

We face some challenges to create and develop future jobs. For example, memory chips used in human minds, if they were disrupted, who will fix them? Is it the surgeon or the programmer? Obviously, it is necessary to overcome these challenges or develop laws, legislation or university curricula, to have problem-solving specialists. For example, we may have a technical doctor who combines both professions. Therefore, human resources departments shall begin to modify their laws and legislation, create new jobs, and train the current staff to make a career shift.



**Moderator:**

What are the challenges that you faced in Estonia?



**Mr. Indrek Önnik:**

Learning and Re-learning are major challenges. The idea of continuous learning becomes a reality. As for the technical aspect and legislative challenges, in general, in Estonia, the question was, should we enact legislation and laws for self-driving cars? Some people said, «Yes, certainly». However, the others said, «No, there must be more comprehensive legislation and laws for all artificial intelligence solutions, and perhaps we shall enact other legislation and laws for modern algorithms».





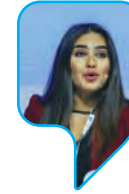
**Moderator:**

What is the impact of this change on society?



**Dr. Karim Sabbagh:**

Legislation cannot control technology. Technology will precede legislation and laws, and sometimes technology and legislation may converge at certain points. If we talk about thinking issue, we should go back to the educational system in our schools and universities. It is important to have a part in the educational system that focuses on the non-traditional liberal arts, as our children can have experience with all kinds of philosophy and influences that are based on ourselves and other people, to become knowledgeable citizens. Therefore, we not only have to emphasize the importance of materials related to science, technology, engineering and mathematics that are necessary for our work areas, but also we have to make literature and arts a part of our educational system.



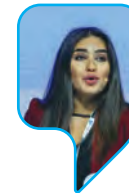
**Moderator:**

What is the evolution driver of the knowledge-based society in the era of artificial intelligence in the future?



**Mr. Indrek Önnik:**

I think it will be in terms of data, data analysis, and proactive analysis.



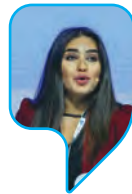
**Moderator:**

Does data present the main core of artificial intelligence era?



**Sheikha Noura Al Nuaimi:**

There is no doubt that data are of great importance, as artificial intelligence inputs rely on a set of data, without which we cannot fully analyze different situations. Data is extremely important, while utilizing it for further development is more important to help institutions and the State to determine their specific trends.



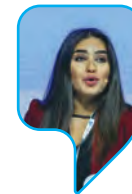
**Moderator:**

Where are we in terms of data collection and analysis? Are we developed or we still need to work more in the future? What are the challenges that we face in this regard?



**Sheikha Noura Al Nuaimi:**

Our challenge is to collect all data in one place. Integration is extremely important and data shall not be isolated.



**Moderator:**

What are the challenges that we face in data collection and analysis?



**Dr. Karim Sabbagh:**

There are some industries where we are achieving progress in terms of knowledge capabilities and various data accumulation. Moreover, there will be a change in traditional industries to a type that does not exist today. In the future, we will not need to own a car; we just have to ask for transportation service from one place to another. Furthermore, technological transformation will create great values.







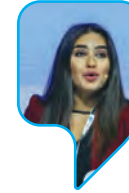
**Mr. Indrek Önnik:**

In Estonia, we did not initially set a limited-period strategy to determine what we would get, but we have developed with the world's development and the surrounding ever-changing circumstances. I believe that the world will keep developing.



**Dr. Karim Sabbagh:**

In UAE, at GITEX, both governments of Abu Dhabi and Dubai announced the launch of the «UAE Pass». It is a digital identity that any citizen or resident can use to conduct transactions with the government or the private sector. We will face a heavy flow of data, as our personal data will be used in various areas of life, to improve services in the future.



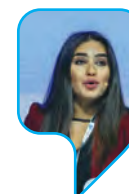
**Moderator:**

Were there certain obstacles during the transformation process? Could transformation be as smooth as possible?



**Dr. Karim Sabbagh:**

Obstacles appeared during the emergence of social media platform protection networks. Substantially, this caused pressure and tension in different societies and economies. However, at the same time, governments realized that the provision of these networks is a must. We need to think about social protection networks for the future.



**Moderator:**

Does brain drain cause an imbalance in knowledge economy?



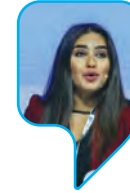
**Sheikha Noura Al Nuaimi:**

UAE has adopted the creation of new disciplines in universities and the development of new updates to curricula to serve advanced science subjects. In addition, the labor market shall be provided to support those disciplines. Moreover, we provide sufficient support and an attractive environment for these competencies to implement their own business.



**Dr. Karim Sabbagh:**

There is no balance. I believe we can benefit from the brain drain in attracting the required skills and competencies to the labor market, and employing them in rapidly developing industries. In addition, it is also important to know that any developing nation should rely on its citizens in future industries.



**Moderator:**

What is the role of competency centers in solving the imbalance between existing competencies and the labor market?



**Mr. Indrek Önnik:**

Small areas often suffer from a lack of competencies. For example, we always suffer from competencies lack in IT. Of course, education is essential and vital; in addition to changing university programs; however, it will cause delay to some extent. If we change today, we will need training courses for four or five years to attract these competencies. Furthermore, it is not necessary to attract competencies to a particular place, as the digital system is not limited to a particular place. Physical presence is no longer a heavy burden. The digital system made services smooth and barrier-free.





# Day 2

## Knowledge Arena

### Session 5

#### Entertainment: the New Player in Building Economies

##### Topics

- Employing Knowledge in the Entertainment Industry.
- How Entertainment Plays a Role in Spreading Knowledge?
- Leisure Investment: Bare Necessity or Luxury?
- Entertainomics: How this Industry Contributes to National Income?

مبادرات محمد بن راشد  
Bin Rashid  
Global Initiatives





# 2018 قمة المعرفة Summit







## Speakers

### **Mr. Amr Banaja**

Chief Executive Officer at the Saudi General  
Entertainment Authority

### **Mr. Joe Zenas**

CEO Thinkwell

### **Mr. Olivier Garaïalde**

Chief Executive Officer - Farah Experiences

### **Mrs. Nadine Samra**

VP digital business Middle East and Africa for Zee  
Entertainment

## Moderator

### **Mrs. Souhair Alqaisi**

Media Personality and Senior News Anchor



**Mr. Amr Banaja**

**Chief Executive Officer at the Saudi General Entertainment Authority**

He previously served as Senior Vice Executive President of Marketing and Community Responsibility at SEDCO Holding Group, and was a member within the Board of Directors at «Tafreeh» Group, a wholly-owned SEDCO subsidiary. He held important positions in companies including Sama Dubai, National Commercial Bank (Investor Services), Unilever, and Gillette.



**Mr. Joe Zenas**

**CEO Thinkwell**

Joe serves on the board of the General Entertainment Authority (GEA) in Saudi Arabia. He was named the Most Influential CEO of 2018 for Entertainment and Design by CV Magazine. Joe worked as Producer & Director of Universal Studios Creative Studio, a Producer for Walt Disney Entertainment & Disneyland.



**Mr. Olivier Garaïalde**

**Chief Executive Officer - Farah Experiences**

Olivier is specializing in financial and operational development. He oversees strategic operations and optimization of Farah's portfolio of attractions. Olivier took on the role of Director of Operations Hotels at Disneyland Paris, and then he moved to Compagnie des Alpes.







**Mrs. Nadine Samra**

**VP digital business Middle East  
and Africa for Zee Entertainment**

She is passionate about creating innovative digital experiences for mobile and web. Previously, the head of digital operations at MBC Group. She has managed several exciting digital businesses and led them to success.









**Moderator:**

What is the meaning of the Entertainment?



**Mr. Amr Banaja:**

Visitors are looking for a unique and great experience, but the Government seeks to provide entertainment services. However, it develops rules and laws to regulate and provide these services appropriately, i.e. to provide licensed and organized services.



**Moderator:**

What does entertainment mean to you? What is the importance of it?



**Mr. Olivier Garaïalde:**

Now, entertainment is a way to gather the family to share happiness and feelings between parents and children, as well as to keep beautiful memories.



**Moderator:**

What do you think about entertainment?



**Mr. Joe Zenas:**

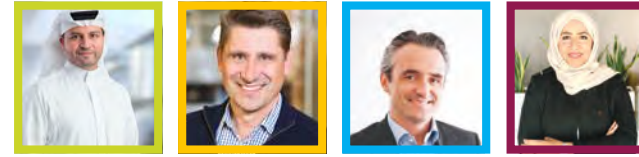
Entertainment is a consumed, exported and imported product. However, it is also an industry that multiplies the influence of social media, and a journey to share emotions and feelings with the family.



**Content consumption  
is definitely increasing.  
Therefore, it is an  
opportunity for all TV and  
content producers.**







**Moderator:**

When we are talking about «Video on Demand» or the video clips in this region, what is the current situation?



**Mrs. Nadine Samra:**

We notice that content consumption is definitely increasing. Therefore, it is an opportunity for all TV and content producers to identify new ways to present the content.



**Moderator:**

In the light of 2030 Vision rise in KSA, can we say that entertainment is a new sector for Saudis?



**Mr. Amr Banaja:**

This is a completely new sector in KSA, and we have exerted many efforts in this regard, as we established cinemas early this year. We have unleashed some opportunities for holding many live events organized on the National Days throughout the year. We already have a lot of concerts and comic plays, as well as street festivals. We also organized circus shows, globally famous artists' concerts, and new international events, such as the «Formula E» organized by the Sports Authority, in addition to other entertainment events. We are building new cities, such as «Qiddiya City», which will be more than two and a half times the size of Disney World in Florida.



**Moderator:**

What does the Video on Demand service offer? What is the difference between it and the traditional TV channels?





**Mrs. Nadine Samra:**

We live in a very fast-paced world, as people want to watch the content immediately. We are trying to make the content available on 'Z5' or 'Weyyak' at the same time as its display on TV channels. In some other cases, the content will be available on our platforms before its broadcast on the television.



**Moderator:**

How can the entertainment industry in UAE - especially in Abu Dhabi - contribute effectively to the economy, particularly in the tourism sector?



**Mr. Olivier Garaïalde:**

By talking about the impact of tourism on the economy, we see that such activities attract many visitors

to Abu Dhabi. We expanded our business through different markets in India, China, KSA, UK, Germany and Russia, where we have employees working on concluding partnerships with different entities, by selling packages and others. The idea is to attract people to Abu Dhabi and Yas Island to sell all of these components and products, and in return, it will certainly increase the rate of tourists attracted to Abu Dhabi and the resulting profits.



**Moderator:**

What is the right strategy that made UAE the fastest growing country in the entertainment sector, especially the entertainment cities?



**Mr. Joe Zenas:**

There are too many attractions. The matter is not only to have good entertainment content, but also the industries that contribute to this sector's development are clearly local.









**Moderator:**

What is the entertainment sector's strategy in KSA?



**Moderator:**

What is your strategy for future entertainment activities in KSA?

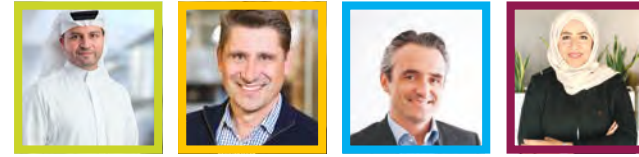


**Mr. Amr Banaja:**

We have different activities in North, South and the Center of the State. We will support UAE and the whole region to ensure that the entire Middle East becomes a touristic destination. It is not a competition, but we integrate with each other.

Using digitization to  
change everything that you  
frequently see on visiting  
the entertainment cities  
enriches the experience.





**Mr. Joe Zenas:**

There are three phases: the first phase is the beginning phase, which was implemented successfully in the past two years. Then the second phase, which shall be started to establish the sector that supports the entertainment process, and the third phase, which is the content localization, as we must establish continuous entertainment ecosystem.



**Moderator:**

How do you see the entertainment future through Video on Demand?



**Mr. Amr Banaja:**

I think that it really forms the future, whereas the digitization will be integrated into every aspect of our lives.



**Moderator:**

How successful are the Video on Demand services in the region?



**Mrs. Nadine Samra:**

The Video on Demand field is still at the beginning, and I believe that it will continue, prosper and become an independent field.



**Mr. Olivier Garaïalde:**

We began the process of digital transformation in the region, which granted visitors a new entertainment experience.





**Moderator:**

How do we utilize the digital experience of Abu Dhabi?



**Mr. Joe Zenas:**

Using digitization to change everything that you frequently see on visiting the entertainment cities enriches the experience. Diversifying the experience every time provides elegance to the visit, as we can use virtual reality or different media to achieve this.



**Moderator:**

Have you reached the phase of making profits?



**Mrs. Nadine Samra:**

We produce a set of high-quality and high-definition series and films, aiming to make profits. To achieve this, we use two models, the first one is broadcasting advertisements during watching the content and the second is subscription, i.e. you shall pay to watch the content.



**Moderator:**

What is the relationship between entertainment and knowledge?



**Mr. Amr Banaja:**

Saudis spent US \$ 6 billion on entertainment outside KSA.









Therefore, we aim to do two things. Firstly, we shall provide local jobs. By 2030, we will have 250,000 new jobs in the entertainment sector. Secondly, we want to create a spending process within the local economy with an amount of US \$ 9 billion. Therefore, by creating this sector and all these jobs, we can create the entire knowledge through or inside KSA.



**Moderator:**

How important are the entertainment cities in conveying knowledge and creating new jobs in the UAE?



**Mr. Olivier Garaïalde:**

For example, we have a roller coaster called «Formula Rossa», which reaches the maximum speed of 240 km/h from 0 km/h in five seconds! It is really a roller coaster, but it depends on high technology. This leads us to teach our students what is going beyond in this industry.



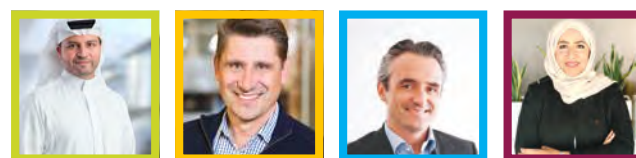
**Moderator:**

How does entertainment support talents and convey knowledge?



**Mr. Joe Zenas:**

We have been educated through studying, while experience and practice lead to knowledge! For the dissemination of knowledge, we must promote



industry and its enabling factors, either entertainment cities, film industry, video games, animation or otherwise.



**Moderator:**

What is the message you want to deliver through the Video on Demand system?



**Mrs. Nadine Samra:**

We want to provide entertainment content to transmit information and knowledge. There are a number of successful examples in producing the educational entertainment series, whether addressed to young generations or to others, the augmented or virtual reality series and other areas.

**Attendees' Questions**

**One of the attendees:**

What are the initiatives do you provide for the people involved with the entertainment sector?







**Mr. Joe Zenas:**

We are a global company that designs entertainment cities and provides entertaining experiences. In other words, our working method helps in conveying knowledge. We deal with local competencies related to our culture to share our knowledge.



**Mr. Amr Banaja:**

In KSA, we provide financial support and also issue licenses for event organizers.

**One of the attendees:**

Is supply and demand in UAE's entertainment sector sufficient, or is there a plan for the entire region's future?



**Mr. Olivier Garaïalde:**

UAE has become a very attractive destination, by establishing many entertainment cities. This rise does not depend only on entertainment cities, but also on other attractions, such as the Louvre Abu Dhabi and the Sheikh Zayed Grand Mosque, which contribute to making Abu Dhabi a leading destination that attracts visitors.

**One of the attendees:**

Are there any programs to train students and graduates, or probably provide them with future job opportunities?



**Mr. Olivier Garaïalde:**

We offer wonderful entertainment components, and we have to manage them integrally. This requires human and financial resources, sales, marketing, different areas and experiences. Initially, we had two or three qualified Emiratis in this sector, but now we have hundreds.





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## Day 2

# Knowledge Opera Hall



## Day 2

# Knowledge Opera

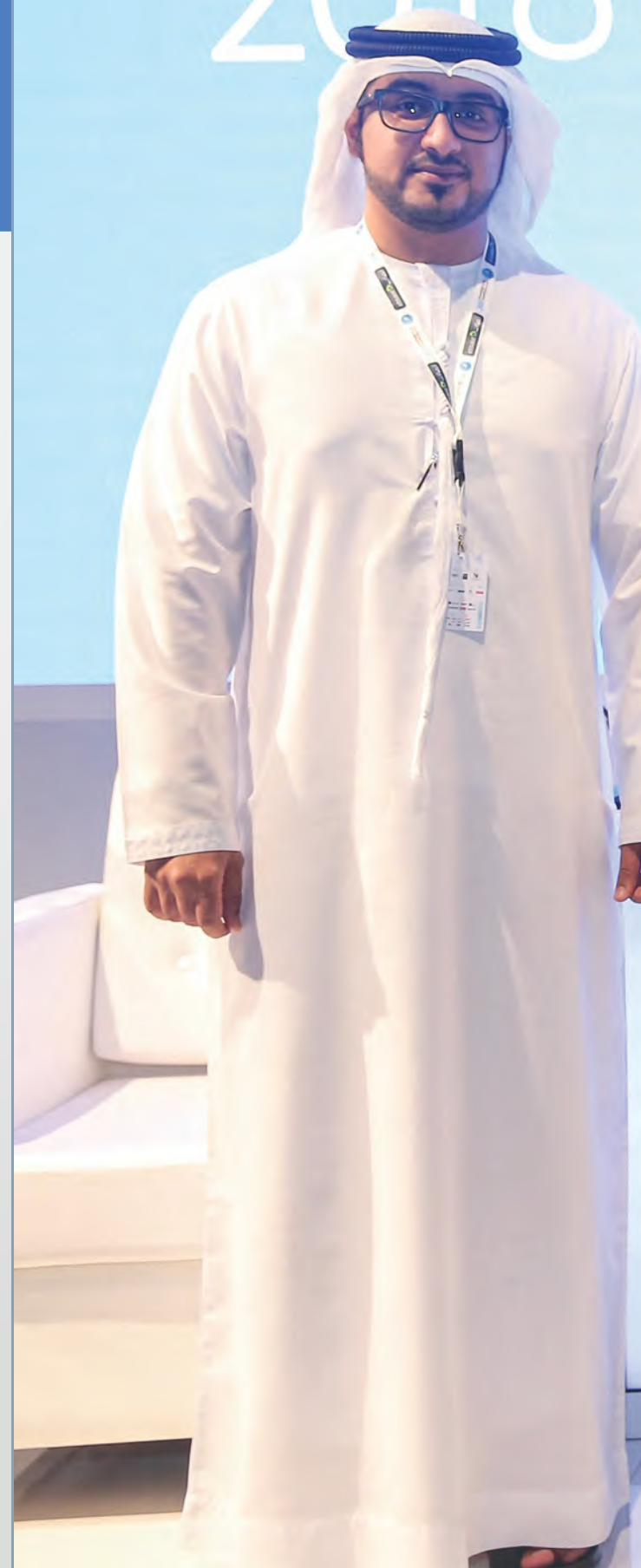
### Session 1

## Knowledge Localization for Space Inhabitation

### Topics

- UAE into space: propelled by young national minds.
- How the space industry contributed to the development of other industries?
- The Importance of Knowledge Sharing in the space industry.
- Global Economic Growth of the Space Sector.
- Knowledge-based economy exchange between Mars and Earth.

2018





# Knowledge | قمة المعرفة Summit







## Speakers

**Mrs. Nicole Stott**

the Artistic Astronaut

**Eng. Mishaal Ashemimry**

First Saudi-American Aerospace Engineer and Founder of  
MISHAAL Aerospace

**Eng. Amer Al Sayegh Al Ghafri**

KhalifaSat Project Manager at MBRSC

**Eng. Eisa Butti Al Shamsi**

Executive Vice President | Technical Solutions and Sys-  
tem Engineering

## Moderator

**Mr. Saud Abdulaziz Karmustaji**

Head of Operations Management of the UAE Astronaut  
Programme - MBRSC



**Mrs. Nicole Stott**

**The Artistic Astronaut**

Nicole attended St. Petersburg College studying Aviation Administration, graduated with a BSC degree from Embry-Riddle Aeronautical University, USA, and received her MS in Engineering Management from the University of Central Florida in 1992.



**Eng. Mishaal Ashemimry**

**First Saudi-American Aerospace Engineer and Founder of MISHAAL Aerospace**

As an aerospace entrepreneur and a consultant in her field, she contributed to 22 different rocket programs and worked in the Aerodynamics Department for Raytheon Missile Systems.



**Eng. Amer Al Sayegh Al Ghafri**

**KhalifaSat Project Manager at MBRSC**

Previously, he worked as a Director of Space Systems Development Department at the Emirates Institution for Advanced Science and Technology (EIAST) and was one of the first engineers in the space program established by EIAST.





### **Eng. Eisa Butti Al Shamsi**

**Executive Vice President at  
Yahsat | Technical Solutions  
and System Engineering**

He was a Payload Operation Engineer.  
Eisa holds a Bachelor in Electrical  
and electronics engineering and an  
Executive MBA from the European  
Institute of Business Administration  
(INSEAD).









**Moderator:**

In the beginning, I would like to ask the speakers to provide a brief on the session's subject.



**Mrs. Nicole Stott:**

I think that traveling to the space gives us an opportunity to recognize life on Earth from another perspective. This experience helped me to draw some lessons, which I will share with you today. Traveling to space is a very wonderful and excellent experience. When we are in space, we are completely separated from the Earth in a way we have never seen before. Through my experience in space, I believe that the way of work there can be inspiring for work and life on Earth. We have created a life-supporting system at the International Station, where there are human beings working and living together. The focus has been on integrating personal and professional relationships, and I think this model is great for working either in space or on Earth as well.



**Eng. Mishaal Ashemimry:**

My fascination with space started in childhood. In high school, I participated in several competitions for the manufacture of robots, and I won together with my team the first rank in a competition at the level of the region among 80 participants, and the third rank globally among 400 participants.

At the university, I chose the aerospace engineering specialty, which includes two types of engineering. I obtained a Master degree in 2007, and my thesis was «Analysis of a Grooved-Ring Reactor Concept for Nuclear Thermal Propulsion».

After graduation, I worked in Aerodynamics Department for Raytheon Missile Systems and contributed to twenty-two different rocket programs. At the age of 26, I decided to establish a missile manufacturing company, which started the actual rocket projects in 2011. My company's objective was to design and build their own rockets to launch small satellites (500 kg) or less to Low Earth Orbit, using a technology that gathers four rockets in one launching process.





#### **Eng. Amer Al Sayegh Al Ghafri:**

In 2006, the Government of Dubai established the Emirates Institution for Advanced Science and Technology (EIAST) and the Mohammed Bin Rashid Space Centre (MBRSC) was established in 2015. In 2017 the center was commissioned to launch (the UAE National Space Programme), which includes four space programs and projects, namely (Integrated Satellite Manufacturing Programme), (Emirates Mars Mission – Hope Probe), (Mars 2117 project), and (the UAE Astronaut Programme).

Integrated Satellite Manufacturing Program was started in 2006 to initially build the capacity of our resources by sending them into scientific missions. In the beginning, we sent 8 engineers then the number increased to 22 then to the number which enabled us to build the capabilities of our scientists and researchers.

Emirates Mars Mission – Hope Probe was launched in 2014, and it is expected that the Hope Probe will make its way to Mars in 2020. The probe will reach Mars in 2021.



The Mars 2117 Project aims to establish the first human settlement on the Red Planet «Mars». Of the important projects under Mars 2117 is (Mars City of Science) in Dubai, which will focus on conducting researches on Mars and how to make life possible. The city area will be 1.9 million square feet and will focus on education, energy, water and food research, and will include research laboratories and a museum. The UAE Astronaut Program will build a national team of Emiratis and provide a sustainable and diversified program to support strategic goals in the space world, including Mars 2117.



#### **Eng. Eisa Butti Al Shamsi:**

Yahsat, fully owned by Mubadala «Investment Arm of the Government of Abu Dhabi», was established in 2007 to provide safe satellite telecommunications services for the United Arab Emirates Armed Forces and the Government, and to meet the growing demand in the region for government, commercial and consumer satellite communication services, which includes Internet satellite services. The company has







three satellites, and with our acquisition of Thuraaya, which owns two satellites, we will have five satellites.

One of the important initiatives of the company is the Small Satellites Program (Cube Sat). Yahsat's role is to finance the program and ensure the quality of implementation. Northrop Grumman Co., a satellite specialist, is also involved in establishing the program, training the participants and recommending updates in terms of structure and methodology, in addition to the launch of (Cube Sat) satellite.

The initiatives also include: Launching Yahsat Space Laboratory to enable students to study and implement projects related to space with sophisticated and advanced equipment. Sixteen students graduated from this lab in two batches.



**Moderator:**

My question to Mrs. Mishaal, do you work in the field of launching a small satellite (Cube Sat)?



**Eng. Mishaal Ashemimry:**

Yes, my company provides these services.



**Moderator:**

Mrs. Nicole Stott, can you talk about the participation of women and their work as astronauts. Please give them a motivational message on this subject.



**Mrs. Nicole Stott:**

There is no difference between men and women when it comes to traveling to space. We must work to involve girls in this area at an early age, because they have a great talent in science and mathematics, but they face a range of impediments, which shall be eliminated.







**Moderator:**

Considering the space world now, we will find that the UAE plays a leading role at the regional and global levels, how did this journey begin?



**Eng. Amer Al Sayegh Al Ghafri:**

This journey started in 2006, where there was an urgent need for the UAE to find a position in the field of science and space. The focus was on space, especially with the establishment of the Advanced Science and Technology (EIAST) that was inspired by the Mohammed Bin Rashid Space Centre (MBRSC) in 2015. The focus on space sciences stems from its inspiration for children, youth, women or men. One of the other factors that motivate the UAE to start its journey into space is that space sciences contribute to opening the horizons to gain access to the latest scientific research and technology.



**Eng. Eisa Butti Al Shamsi:**

If we look at the space sector in the UAE, we will find that we are working in this field for almost thirteen years, and now we have ten satellites. Other tasks are underway to manufacture other types of satellites by 2020.



**Moderator:**

Mrs. Nicole Stott, what are the challenges you are facing as an astronaut?



**Mrs. Nicole Stott:**

I think the most important challenge is reviewing my choices. Do my acts conform with choices, or not? Some people see that astronauts have some privacy, but I do not see things this way. What happened is that I studied the right subjects, and all I





did was obtaining a flight license, studying space engineering and joining NASA because of my love and passion for this area.

**In UAE, we have ten satellites.**

**Other tasks are underway to manufacture other types of satellites by 2020.**



**Moderator:**

Eng. Mishaal Ashemimry, could you please answer the same question?



**Eng. Mishaal Ashemimry:**

Financial matters are the biggest challenge for me. Missile industry needs a lot of money, huge investments, and long-term investments at high-risk



قمة المعرفة  
المعرفة Summit  
2018

371

levels. If you want to pump millions of dollars into the missile industry, it will take at least 10 years to generate returns, and many investors are reluctant to enter the missile industry.



**Moderator:**

Certainly, knowledge sharing is one of the important matters in the field of space industry. What are the main factors that must be taken into consideration when choosing the right partner?



**Eng. Amer Al Sayegh Al Ghafri:**

In the UAE, we benefited from the experience of South Korea, and I see that if your goals are clear for the potential partners, many parties will be open to work with you to implement these goals. An important point is that when sending cadres to learn, you have to keep them motivated to add value to partners, and this is what we did when we worked on Dubai Sat

2. Many of the techniques used in its manufacturing were proposed and developed by our engineers. The partnership must depend on the principle of achieving the interests of all partner parties.



**Moderator:**

What are the collaborative practices that occur in the International Space Station, which can be applied here on Earth, and how it works at the station?



**Mrs. Nicole Stott:**

The station was constructed under international cooperation between five space agencies representing 16 countries. This cooperation in the station depends on the principle of knowledge exchange, where you share your knowledge with others, and learn new knowledge at the same time. The station from this side represents a collaborative site that embraces a crew of six members and one leader, who may be of

any of the nationalities participating in the station. I think that teamwork is the reason for the success of this collaborative form.



**Moderator:**

Can you give us your last note for today?



**Mrs. Nicole Stott:**

We should pay attention to the established fact, stating that we all are earthlings, and I call everyone to focus on that and on our cooperation from this perspective.

“ **Space science is very important, as many of the techniques developed in the space benefited us in different areas.** ”



**Eng. Mishaal Ashemimry:**

Space science is very important, as many of the techniques developed in the space benefited us in different areas, such as science, medicine, etc.



**Eng. Amer Al Sayegh Al Ghafri:**

We have learned from our achievements that working in the field of space needs patience and achieving success requires long-term efforts, and it is important to acquire knowledge constantly. If we focus on the target, we will be better constantly.



**Eng. Eisa Butti Al Shamsi:**

I think that we should have three elements to achieve success, namely the appropriate qualifications, the right place and the right time.







## Day 2

# Knowledge Opera

### Session 2

## Education: the cornerstone for building a knowledge economy

### Topics

- The Role of Education in Knowledge Economy.
- Education: a key pillar of productivity and economic competitiveness.
- Preparing the educational system to cope with the needs of the knowledge economy market.
- Virtual education: the alternative option for the young generation.
- Knowledge economy as an academic major.
- The relative importance of vocational and academic education.





# Knowledge قمة Summit المعرفة







## Speakers

### **H.E. Dr. Ahmad Belhoul Al Falasi**

Minister of state for higher education, UAE

### **Dr. Fatima Al-Shamsi**

Deputy Vice chancellor for Administrative Affairs –  
PSUAD

### **Mr. Ken Mayhew**

Education and Economic Performance Professor at  
Oxford

### **Mr. Jeff Utecht**

Founder & CEO at Eduro Learning

## Moderator

### **Professor Colleen McLaughlin**

Professor at the University of Cambridge, Director of  
Educational Innovation





**H.E. Dr. Ahmad Belhoul Al Falasi**

**Minister of State for Higher Education, UAE**

His Excellency has served as a Chairman of the Federal Authority for Human Resources and Chairman of Emirates Space Agency since June 2017. His Excellency previously served as a Chief Executive Officer of Masdar, an Executive Director for Strategy and Development of the Tourism Sector of the Department of Tourism and Commerce Marketing in Dubai.



**Dr. Fatima Al-Shamsi**

**Deputy Vice Chancellor for Administrative Affairs – PSUAD**

Dr. Fatima Al-Shamsi is a former Secretary General of United Arab Emirates University. She holds a Master of Economics from the University of Baltimore, USA. She holds a PhD in Economics from the University of Exeter. Dr. Al-Shamsi is currently the Vice Chair of the Board of Trustees of the GCC Institute, Washington D.C.



**Mr. Ken Mayhew**

**Education and Economic Performance Professor at Oxford**

Emeritus Fellow in Economics at Pembroke College Oxford and Extraordinary Professor of Education and Economic Performance at Maastricht University. For over 15 years, Ken was the Director of SKOPE, a multi-disciplinary research center on skills, knowledge and organizational performance based at Oxford University. His first job was in Her Majesty's Treasury.



2018 Knowledge Summit  
المعرفة قمة 2018



**Mr. Jeff Utecht**

**Founder & CEO at Eduro Learning**

Having taught at International Schools in the Middle East and Asia, Jeff Utecht has moved from a classroom teacher to an administrative position. Jeff co-founded the Certificate of Educational Technology and Information Literacy program ([coetail.com](http://coetail.com)) in 2010.











**Moderator:**

I ask the speakers to comment on the title of the session, each one from the perspective of his specialization and personal vision.



**Mr. Jeff Utecht:**

Statistics show that 40% of jobs will be for entrepreneurs and business leaders by 2030. If you want to enter the world of entrepreneurship, you have to be flexible and able to abandon old ideas, convictions, and rapid change to adapt, learn and understand the new and the different. I believe that the essence of knowledge economy lies in educating today's children that the most important thing is to acquire the skill of collecting knowledge when needed. Now, knowledge means the ability to learn positively and negatively, and quick re-learning.



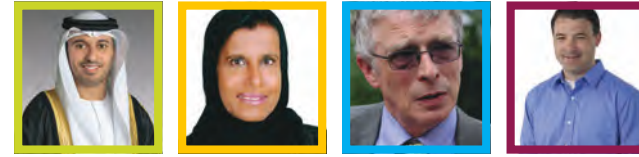
**Moderator:**

What is the impact and consequences of freelance and entrepreneurship on your vision for developing a knowledge economy?



**Mr. Jeff Utecht:**

We should recognize that the concept of communication in the present and the future is not limited to traditional face-to-face communication, but extends to include communication with others online in different places around the world. We need to teach our children teamwork skills in the context of the traditional process of communication, i.e. face-to-face, but it is also important to teach them the skills of cooperation with team members around the globe. We also need people to have the ability and willingness to identify problems so that we can find solutions. Efforts should focus on raising a generation of young people who are able to identify problems. I think that this is the way to redefine the nature of future skills, which we need in the era of knowledge economy.



**Moderator:**

What are the main requirements of the points you indicated in your note?



**Mr. Jeff Utecht:**

The problem is that when we work to change the entire education system, we will face difficulties and psychological barriers among teachers, parents and officials who compare the new system to the old one. Therefore, we seek to make a radical shift in our understanding of the concept of knowledge.



**Moderator:**

Mr. Ken, can you comment on the session's name?



**Mr. Ken Mayhew:**

**First**, the reformation of the education system may be a necessary step in order to achieve economic success, but it is not enough. We should focus on matching education quality with the needs of the employers, with respect to the skills required for the performance of the business. That means the need to integrate major educational policies in the industrial strategy, explore the structure of the production process and product quality in the future and then adapt the education system accordingly to meet these specific needs. However, the pivotal matter lies in the need to make government efforts to develop the right and smart industrial strategies and linking them to education.

**Second**, it is important to think about finding alternative paths for learning away from the traditional university education such as vocational education model, and these paths should not be compared to the traditional model of university education.

**Third**, students in business-related schools acquire a very limited set of skills specifically required by employers in a particular area, as they are specifically





required in that field. Students in other schools acquire a wider range of skills, thus achieving greater success in work and being more capable of adapting to the changing conditions in business and markets better. Courses in vocational schools must also focus on critical thinking skills.



**Moderator:**

From your point of view, what is the common element that should be considered in all educational systems needed by all youth today all over the world without any exception?



**Mr. Ken Mayhew:**

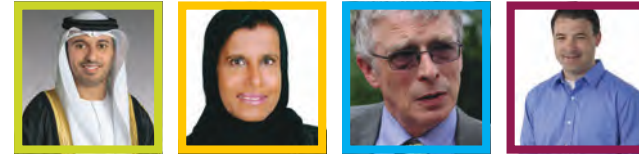
First, the basic knowledge of reading, writing and arithmetic principles.



**Moderator:**

How can we compromise between education and the needs of business and industry, in a constructive and effective manner?





#### Mr. Ken Mayhew:

We need to involve employers in the compromise process without being engaged too much, as it is also important to be realistic in this regard. Business owners search for the skills they need; and it depends on the nature of the work to be performed, and designing the job descriptions of the required works and the provided products and services. The only way to build a true knowledge economy is to provide the largest possible number of high-level jobs that require skills. We should think about the relationship between earning profits and job design.



#### Moderator:

Dr. Fatima Al-Shamsi, what is your comment on the session's name?



#### Dr. Fatima Al-Shamsi:

The knowledge economy needs globally agreed basic pillars. The World Bank identified four key pillars, which depend mainly upon one another as follows:

1. Economic & Institutional System: This system shall be motivating and supportive, and shall seek to create, develop and use knowledge effectively and efficiently. This system shall motivate and support the second pillar.
2. Education and Skills Development: Education opportunities should be available to all to create a human force able to utilize and share the available information and knowledge.
3. The ability to disseminate knowledge and benefit therefrom. It is necessary to establish an infrastructure that has the ability to disseminate and transfer this knowledge in a more efficient and quick way. This means that we need technical and informational development and communication tools to facilitate transferring such information and knowledge.
4. Innovation: This knowledge encourages us to achieve further innovations to develop knowledge

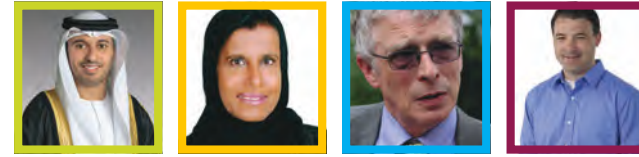




constantly because we are aware that knowledge is sophisticated in nature.

We should be aware that knowledge economy has become dependent on those intangible resources, which are dealing with knowledge, skills and innovation. The way to meet the knowledge economy requirements is to develop a quality education system that takes into consideration these requirements and seeks to build the work force that has the ability to disseminate and develop this knowledge and information, as well as the exchange of views. This requires linking to cultural values, and developing rules, on which we depend in order to sustain and develop the knowledge economy. We should also change our perception of education so that we may benefit from the available human sciences

in creating a stimulating learning environment that encourages creativity and innovation. In recent years, there has been a discussion on virtual education and its different requirements. A number of studies pointed out that in light of the currently available resources and modern technology, this type of education allows students to acquire knowledge and study in a different perspective and in a friendly manner, which drives them to more innovation and creativity. With regard to receiving, use and dissemination of information, it should be emphasized that there is no single way suitable for all students. We should also develop knowledge economy to serve economic, cultural and social privacy.



#### **Moderator:**

What are the practical implications of what I said about university education and structures and working at the university?



#### **Dr. Fatima Al-Shamsi:**

Educational institutions should ensure that their curricula and programs are adapted to accommodate these shifts in knowledge economy, employ modern models of education to promote innovation, and transform them into modern educational systems in which students are the active component of the learning process, and switch from the schooling process to the process of learning. So the student chooses the method of education he wants and the suitable time to learn. Virtual classes should be replaced with traditional classes so students can choose the right time to study, the scientific material, and the learning method (practical or theoretical).



#### **Moderator:**

Can you shed light on the key issues in this regard, from your point of view?



#### **H.E. Dr. Ahmad Belhoul Al Falasi:**

We are facing two main challenges at this time. The first one is the big burden incurred by higher education system. Higher education is facing a major challenge to prepare students to cope with the labor market requirements in the light of the jobs that no longer exist in our current market and other jobs that are on their way to extinction. There is also a challenge that relates to doubting the usefulness and importance of university education, as many companies in the world and the UAE select their employees based on skills, not the university degree. Therefore, we notice the doubts on the importance of higher education among youth. The challenge that we are facing today is that the market requirements are changing, in addition









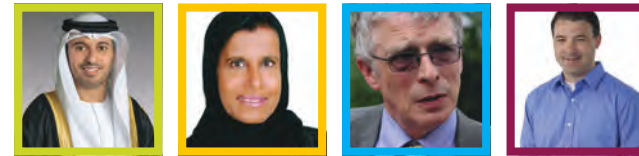
to the gap between education and labor market requirements.

Higher education is facing the difficulty in providing the required specializations due to the rapid change of the market requirements. However, the biggest focus worldwide is on behavioral and interpersonal skills and embracing the concept of lifelong learning, critical thinking, creativity, innovation and communication. Communication skill is gaining great importance in the current era, as this skill is very important and difficult. I think that instilling these skills in students is the biggest challenge, in addition to the challenge of restoring people's confidence in the importance of the university degree.



#### **Moderator:**

What are the challenges facing you as one of the decision-makers during the process of transformation from an education model that is based on the dissemination of knowledge to the model of learning? What are the challenges facing decision-makers when changing the entire education system and adopting a new and completely different model?



#### **H.E. Dr. Ahmad Belhoul Al Falasi:**

We need time to complete the process of transition to a knowledge economy, and we will not succeed in completing the transformation process in one generation; this is a very significant shift.

The first stage of the transformation process, which I call the foundation stage, is the deployment of schools and universities. In the UAE, we have more than 72 licensed universities and 100 universities in the free zones. We have a huge number of universities and academic programs, but the biggest challenge is the quality of educational content. The quality of educational content is very important because without it, knowledge economy cannot be built.

The other side is related to scientific research, and its problem in the UAE is the lack of areas that support scientific research. We look forward to the contribution of other sectors in scientific research.

The big challenge facing politicians and decision-makers is how to motivate citizens to get involved in the scientific research sector and





stimulate the private sector to invest in scientific research. As soon as possible, we will launch an initiative to promote scientific research from the creativity perspective. To sum up, challenges are the quality of education and scientific research.



**Mr. Jeff Utecht:**

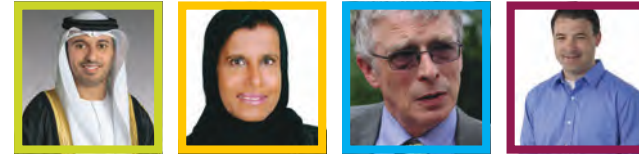
We can change the curriculum as we wish but without touching any real change, because the most important thing is to change the education method, not the content.



**Moderator:**

The most important question is what do students learn? What is the quality of the education they receive?





#### Mr. Ken Mayhew:

There is a real problem with regard to the quality of education. So, educators' attention would be on the performance standards of students in examinations and other areas. Students do not learn the necessary skills in the right way in classrooms; but it shall be done through trips, role-play, and cultural and social activities in schools.



#### Mr. Ken Mayhew:

We should link education to the labor market in a reasonable and constructive way. Human capital is the main pillar when we pay our attention to the promotion and development of human capital by providing the required skills. This will result in strengthening the economic performance of the country and improving the situation of individuals.



#### Moderator:

You have raised a very important point, which is that we shall pay our attention to the issue of teachers' skills development.

#### Attendees' Questions

##### One of the attendees:

How can we direct employers to give priority to job design, not to make profits?



#### Dr. Fatima Al-Shamsi:

I think that there is no gap between the business sector and educational institutions. However, if there is a gap, this may be the fault of the business sector because all boards of directors in higher education institutions comprise representatives of the private sector and the government, taking into consideration that these boards are the responsible bodies for developing these policies.





## Day 2

# Knowledge Opera

### Session 3

## Media: How it Influences and Gets Influenced by Knowledge Economy

### Topics

- Media in the knowledge economy: The rise of the digital & fall of the printed.
- The end user: from receiving knowledge to creating it.
- Choosing media content in the age of abundance.
- How the young generation contributes to changing the features of the media industry?
- The role of media in creating knowledge content.



# 2018 Knowledge Summit | قمة المعرفة



عبد المحسن سلامة  
Abdel-Mohsen Salama  
Minister of Higher Education and Scientific Research, Egypt



علي جابر  
Ali Jaber  
President of the National Society for Human Rights







## Speakers

### **Sheikha Fouz Fahad Al Sabah**

Founder of Crowd Creative House and Khaleejesque Media

### **H.E. Mansour Ibrahim Al Mansouri**

Director General of National Media Council

### **Mr. Abdel-Mohsen Salama**

the chair of Al Ahram board and the Head of the Egyptian  
Syndicate of Journalists

### **Mr. Ali Jaber**

Dean, Mohammed Bin Rashid School of Communication at  
American University of Dubai (AUD) Group TV Director, MBC

## Moderator

### **Mr. Marwan Al Hel**

Producer & Presenter



**Sheikha Fouz Fahad Al Sabah**

**Founder of Crowd Creative House and Khaleejesque Media**

Sheikha Fouz is an ambitious social entrepreneur fascinated by the publishing world and the rapidly developing creative economy in the Arab region. During her participation in the Kuwait National Fund for SME Development – «Woman's Entrepreneurship», she said it is time for women to play a significant role in business sector in Kuwait.



**H.E. Mansour Ibrahim Al Mansouri**

**Director General of National Media Council**

Al Mansouri graduated from the Department of Computer Science, University of Toledo, Ohio. He holds a Master's degree in Strategic Security Studies and National Resources Management from the National Defense College. He holds several specialized certificates.



**Mr. Abdel-Mohsen Salama**

**The chair of Al Ahram board and the Head of the Egyptian Syndicate of Journalists**

Mr. Abdel-Mohsen Salama is the Chairman of Al Ahram organization since 2017. He has worked for Al Ahram daily newspaper since 1987. Prior to that, Abdel-Mohsen held several leading positions including: Former Vice President of the Egyptian Syndicate of Journalists (2010), Board Member of Al Ahram Organization (2006-2017). He graduated from the Faculty of Mass Communications, Cairo University in 1985.





**Mr. Ali Jaber**

**Dean, Mohammed Bin Rashid School of Communication at American University of Dubai (AUD) Group TV Director, MBC**

Obtained his Bachelor in Business Administration at the American University of Beirut in 1984 before obtaining his Master's in Communications from Syracuse University, the USA in 1986. Ali joined the Fine Arts Faculty of Beirut University College.







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**Moderator:**

Welcome everybody, with the rise of modern technology, the twenty-first century became the century of knowledge economy. So, how does the media affect the knowledge economy? Mr. Ali Jaber, what is your opinion?



**Mr. Ali Jaber:**

Media has become an industry that achieves significant profits, and we do not yet know how to deal with it. In the past, we thought that it was possible to control the media, but now this has become impossible. The primary effort is no longer focused on the control of the media, but we strive to tame it only a little.



**Moderator:**

Sheikha Fouz, you are a model for blending media with knowledge economy: therefore, you established Khaleejesque Company. Please tell us about this company, specifically on how to link between the two fields, and who is the most beneficiary?



**Sheikha Fouz Fahad Al Sabah:**

Khaleejesque started in 2009 in the State of Kuwait. Our focus was on covering innovation and culture in the Gulf countries. When I went to study abroad, I found out that they do not know much about the Gulf States and Arab countries. Hence, I started to think about establishing a media platform to educate ourselves on the level of the Arab Gulf region. We then published a printed magazine to give young people an opportunity to become part of this platform. From 2009 until today, we have been active in Kuwait and in the Arabian Gulf. As a media outlet, especially in knowledge economy



and creative economy, we think about how to develop and expand in all aspects: economy, the media, and the youth.



**Sheikha Fouz Fahad Al Sabah:**

I think that the two areas serve each other.



**Moderator:**

You linked between the two sides: knowledge economy and the media. So, which is the bigger beneficiary?







**Moderator:**

Mr. Abdel-Mohsen Salama, in the light of knowledge economy, will the printed media vanish, and the digital media flourish?



**Mr. Abdel-Mohsen Salama:**

Traditional media faces a critical stage. In general, media must be developed in all its traditional forms (journalism, radio, television) and very quickly. However, will it vanish? No, it will not vanish based on reality, not on a personal impression.



**Moderator:**

I would like to ask H.E. Mansour Ibrahim Al Mansouri, do you have an opinion about the imminent disappearance of the print media?



**H.E. Mansour Ibrahim Al Mansouri:**

In the event that media institutions do not adapt to the digital age and the youth component is not integrated, as youth are the largest segment, the world would fall apart.



**Moderator:**

Mr. Ali Jaber, do you have any comment?



**Mr. Ali Jaber:**

I would like to clarify an important and essential thing, what is the meaning of the print media term?



**Moderator:**

Traditional media such as newspaper.



**Mr. Ali Jaber:**

There is nothing named «print media», the news concept is constant. However, the paper is a distribution method, and the Internet is the same. Both of them are not media in itself.



**Moderator:**

What about newspapers that still rely solely on print news, and has not transformed to digital?



**Mr. Ali Jaber:**

There is no print news, but some news is printed on paper. Paper is a medium of distribution and a newspaper is a limited publication medium.



**Moderator:**

What about the user? Is he under surveillance, as you kindly noted?



**Mr. Ali Jaber:**

There is no surveillance on social media, but I think that bad people today are the people involved in social media because they violate privacy and data ownership, etc.





#### **Moderator:**

H.E. Mansour Ibrahim Al Mansouri, the user has turned from being receivers of news to the creators of news; is everybody able to create and develop media after the emergence of advanced applications?



#### **H.E. Mansour Ibrahim Al Mansouri:**

Today, users should play an important role in the currently deployed culture formats on social media or in the digital age.





**Moderator:**

Mr. Abdel-Mohsen Salama, do you think that the traditional media or press media is at risk due to the new emerging challenges of digital media?



**Mr. Abdel-Mohsen Salama:**

I want to ask, is the user capable of being a newsmaker? No, because news has its own elements and will remain so. The media is not just news, but there are more matters that shall be considered.



**Mr. Ali Jaber:**

You mean the press.



**Mr. Abdel-Mohsen Salama:**

The press is not only news, but it has many shapes and news is one of them. There are opinion articles, analyses, reports, and investigative reports besides news.



**Moderator:**

Sheikha Fouz, I would like to talk about the selection of media content through the company you have, how do you choose a media content that attracts more than other types of content? What are the required basics?



**Sheikha Fouz Fahad Al Sabah:**

As for the selection of content, we are always on social media to find creativity by monitoring bodies or organizations that help with building a creative culture. We focus on having interviews with youth and learn





about their challenges, opportunities, innovations, and the issues that concern them, and then we collect and formulate the content.



**Moderator:**

Is there any difficulty in dealing with young people?



**Sheikha Fouz Fahad Al Sabah:**

Certainly, there is a huge difficulty in searching for creators and how to access them. Second, their fear of the media presence.



**Moderator:**

Mr. Ali Jaber, you are the dean of the Communication School, is the current generation of young people able to carry the responsibility of guiding the media trend?



**Mr. Ali Jaber:**

At the Communication School, we should teach young people ethics, legal foundations and legal boundaries of their mission and so on. Therefore, I believe that media teaching now in the Arab world is of paramount importance more than anything else.



**Moderator:**

H.E. Mansour Ibrahim Al Mansouri, when we talk specifically about the current generation of young Emiratis, is this generation able to steer the economy or the UAE media to the safe side?



**H.E. Mansour Ibrahim Al Mansouri:**

Youth agenda and youth empowerment are at the priorities of our leadership, the UAE government and people. Therefore, I believe that Emirati youth have the ability, not only to take the UAE media to safety, but also to come up with something innovative and new, and contribute to enriching the media content globally.

“ Youth agenda and youth empowerment are at the priorities of our leadership, the UAE government and people. ”



**Moderator:**

Mr. Abdel-Mohsen Salama, what is the role of mass media in creating the knowledge content? Can it keep up this performance?



**Mr. Abdel-Mohsen Salama:**

The content industry and the media will not be part of the industry of cultural, economic, industrial and progressive media content, unless they have the basic means of the journalist or the media working in this field.



**Moderator:**

Mr. Ali Jaber, now the largest challenge is the credibility of news, because social media has become a medium of spreading lies on the web, so what do you think about this bad use? How can we get rid of these rumors and lies, and assure the credibility of the news?







**Mr. Ali Jaber:**

Checking the accuracy of news before publication is the philosophy of real journalism. Social networking sites lack the verification of content, so they have become platforms for community manipulation. Now, the point here is that platforms should take note of the problem, and address and correct it through algorithms and advanced technology.

**Attendees' Questions**

**One of the attendees:**

I would like to refer to some important issues. First, many people are confused between the value of a thing and its spread. Second, the issue of making every citizen a journalist will affect negatively the real value of journalism because journalism needs effort, research and knowledge value. Third, in the midst of rumors and low-level media, institutions, which have something to offer, are going to hold up.

**One of the attendees:**

The recipient today is not only receiving news, but also is making news whether we like it or not. However,

will the newspapers vanish? I can say with confidence, yes. Today's news reaches me before it reaches newspapers.

**One of the attendees:**

I feel that everyone assumes that the world of media is Google, Facebook, Twitter and YouTube, as if this is the world! For example, there is no Facebook, Twitter and Gmail in China!



**Moderator:**

However, China has special programs because the population of China is more than one billion.

**One of the attendees:**

I think we should not teach how to use Facebook, Twitter or other media, but we should teach duties, ethics and responsibility for the word. The social media has become a battlefield for fighting, immoral offense, slander, rumors and so on! The print newspaper will last; it is just a hiccup.



#### One of the attendees:

My question to Mr. Ali Jaber, I think that the challenge facing our region in terms of knowledge economy in the media is to stop being a recipient but be a sender. Netflix, for example, is expanding all over the world, and on its way to the region; it started buying and even producing Arab series and content.



#### Mr. Ali Jaber:

Netflix has come to the Arab market, depending on the background of foreign producers, Hollywood, so if Netflix wants to establish its footprints mainly in the Arab world, it must produce very exciting content and deal with sexual, non-sexual, political and social issues. I think it cannot do that, because the network will be finally closed. Therefore, I think that Arab content will last.

“ **Checking the accuracy of news before publication is the philosophy of real journalism. Social networking sites lack the verification of content.** ”





## Day 2

# Knowledge Opera

### Session 4

## FinTech: Where Finance Meets Technology

### Topics

- **Financial Technology Sector (FinTech):**  
Definition, Challenges and Prospects.
- The impact of the knowledge revolution on the development of financial services.
- Towards cashless financial transactions.
- The importance of developing the infrastructure of the digital payments.





# 8 | قمة المعرفة Knowledge Summit





## Speakers

**Mr. Naimish Shah**

Head of Innovation and Emerging Technologies, Group  
Digital Office Emirates NBD

**Dr. Ayesha Khanna**

Co-Founder and CEO of ADDO AI

**Mr. Khalid Saad**

CEO Bahrain FinTech Bay

**Mrs. Raja Al Mazrouei**

Executive Vice President – FinTech Hive at Dubai International Financial Centre Authority (DIFC)

## Moderator

**Mr. Zeeshan Uppal**

COO & Co- Founder Yielders





**Mr. Naimish Shah**

**Head of Innovation and Emerging Technologies, Group Digital Office  
Emirates NBD**

He led the first interbank trade finance and remittance implementations of Blockchain technology in the UAE between ICICI Bank in India and Emirates NBD in UAE. He actively led the infrastructure and security teams to build and maintain an agile infrastructure with optimal security.



**Dr. Ayesha Khanna**

**Co-Founder and CEO of ADDO AI**

Ayesha spent more than a decade on Wall Street developing large-scale trading, risk management and data analytics systems. She was a co-founder of the Hybrid Reality Institute, a research and advisory group established to analyze the social and economic impact of accelerating technologies. She directed the Future Cities Group at the London School of Economics, and has been a Faculty Advisor at Singularity University.



**Mr. Khalid Saad**

**CEO Bahrain FinTech Bay**

Khalid worked for Ernst & Young and SEI Investments in London. He has an MSC from Imperial College London and a BSc from the University of Exeter (first class honors).







**Mrs. Raja Al Mazrouei**

**Executive Vice President – FinTech Hive  
at Dubai International Financial Centre  
Authority (DIFC)**

An executive graduate from Harvard Business School. She holds an MBA in Global Leadership and Management from the United Arab Emirates University and a Bachelor's degree in Business Information Technology from the Higher Colleges of Technology in the UAE.









**Moderator:**

What is the meaning of financial technology or what we call (FinTech)?



**Mr. Naimish Shah:**

We see that financial technology is all that brings value to institutions faster.



**Mr. Khalid Saad:**

(FinTech) is thinking about doing things in a very different way.



**Moderator:**

Recently, DIFC has signed ten memoranda of understanding with leading centers in the area of FinTech all over the world. What do you expect to achieve from such cooperation?



**Mrs. Raja Al Mazrouei:**

We want to launch opportunities for FinTech all over the world from inside and outside the region.



**Moderator:**

From your point of view, what will FinTech bring to Bahrain and the financial ecosystem there?





**Mr. Khalid Saad:**

I think (FinTech) makes a major shift in the way people, companies and the financial ecosystem deal with the disruptive changes and the consequent technology.



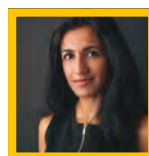
**Moderator:**

What are the major differences between the traditional financial transactions and the ever-changing FinTech environment?



**Dr. Ayesha Khanna:**

We need to serve our customers wherever they are and provide the services they need in a seemingly data-based experience that makes the services customized to them. I think this is the big difference,



where the customer has become in more control, and now it is very customer-centric.



**Moderator:**

What is Emirates NBD doing to drive innovation and change?



**Mr. Naimish Shah:**

It is about operational efficiency and alternative and new business models, in addition to new profit channels and involvement of customers. These are the main four topics that we deal with.



**Moderator:**

What are the challenges and difficulties that FinTech faces in the region?





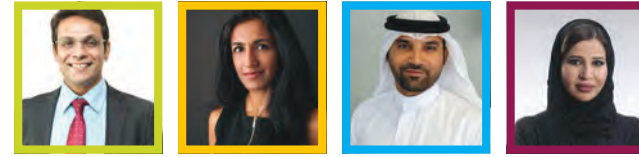
**Mrs. Raja Al Mazrouei:**

Startups in the region need regulations and laws, in addition to proper funding, an enabling work environment and reaching financial institutions that may use technology in their business. In DIFC, we tried establishing a comprehensive system of different components and partners to enable this system. We are working with 21 financial institutions that open their doors to innovation, and we are joining them in the field of FinTech. Now, there are more than 50 FinTech companies established in the financial center.



**Mr. Khalid Saad:**

There is an important thing, which is the absence of differentiation in banks between SMEs and startups. Here appears the opportunity and possibility of alternative funding platforms as the traditional financial institutes will not be able to bridge that gap.



**Dr. Ayesha Khanna:**

I think funding SMEs represents a huge problem, not for FinTech companies but generally.



**Dr. Ayesha Khanna:**

Banks are very important in the financial ecosystem of the FinTech.



**Moderator:**

From a banker perspective, how do you see FinTech? How does it seem from the overall perspective of banks?



**Mr. Naimish Shah:**

It is difficult for companies operating in the FinTech field to work alone as it needs support from banks.



**Mr. Khalid Saad:**

We now live in an experimental world. All companies operating in the field of FinTech see that they need to cooperate. I think that whenever companies move slowly, this cooperation becomes more important. In the end, you can cooperate, but the faster you realize that you need to go back to the benefits people already need, and the packages that provide good experiences to them, the more aware you will be of the immediate opportunity to collaborate with the companies in the field of the FinTech.







**Moderator:**

In light of current developments and changes, how do you see banks keeping up with these operational changes?



**Mr. Naimish Shah:**

We have launched a program for digital transformation with an amount of AED 1 billion. It is not only to change paper transactions, but to have a full set of digital processes that have a beginning and an end. The idea is to use the digital transformation to move to the application phase, then to open banking.



**Mrs. Raja Al Mazrouei:**

When we started the program last year, we had eleven financial institutions and we discussed the FinTech

and innovation with banks.

However, they had no idea about it. They thought that we would not come back to discuss the issue. However, we returned the following year and multiplied the number of financial institutions and participation applications in different programs. In addition, cooperation rate increased better.



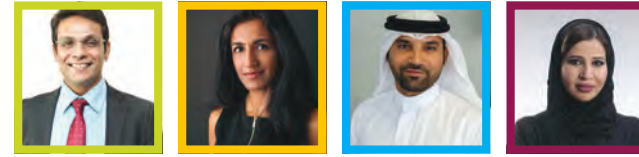
**Moderator:**

What do you think we need to control, measure and properly utilize the growth of FinTech business?



**Mr. Khalid Saad:**

I think that one of the issues is dividing the financial ecosystem into several sectors. We see that our first need is discussing the education process, especially with regulators and law makers, as they are usually worried about anything strange and they do not accept it, the thing that needs time to be handled. The openness of regulators and law makers enforces the rise of the financial ecosystem.



#### **Dr. Ayesha Khanna:**

In the emerging markets of developed Western countries, especially the counties that have a well-developed private sector, the governments are proactive. Throughout Asia and the Middle East, developed governments force the change. Moreover, we see that most of these countries began to make such strategies operational, making the financial ecosystem grow properly.



#### **Mr. Khalid Saad:**

Innovation is not limited to information technology departments and it is not centered in one region. However, it is an entire integrated element in the institution fabric and on different levels.





**Moderator:**

Today, people tend to perform all transactions through phones, is there a possibility to increase services implementation away from banks?



**Dr. Ayesha Khanna:**

Mobile phones became the gate of financial services; through phone you can obtain a huge amount of data.



**Moderator:**

Is there anything you are doing recently regarding the traditional methods of banking, financial services, innovation access and FinTech?



**Mr. Naimish Shah:**

When we launched the first electronic bank and called it Liv; we were not sure of its success. The result was a surprise after 15 or 18 months, as there was an acquisition of new customers compared to traditional banking. This confirmed that data is everything. Therefore, we got benefit from this experience to utilize in traditional banking in the bank. Furthermore, there is the issue of SMEs and startups,





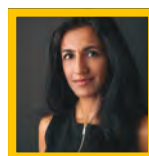
as there are two challenges; the first is the difficulty of opening bank accounts, and we are trying to find solutions to that problem.

The second challenge is addressing the issue from SMEs' point of view regarding enrolling in FinTech system.



#### **Moderator:**

Can regulations and laws used in traditional financial institutions be applied to FinTech? What happened with regulators and law makers to get rid of imposed restrictions and deal with this issue?



#### **Mrs. Raja Al Mazrouei:**

It is a learning process for regulators and law makers, as we need to educate them with information technology to be able to develop proper regulations and laws. Moreover, in case of developing regulations and laws for a certain activity, it can be applied in other fields.



#### **Mr. Khalid Saad:**

There must be an additional mechanism and a clear way to determine your direction. This forces regulators and law makers to think about what technology does and how to organize that. In addition, we should think about the best practices that can be applied locally within a time frame and develop a perception for the way of making things.





**Dr. Ayesha Khanna:**

The regulations and laws of the FinTech cannot be placed in isolation of other regulations.



**Moderator:**

Regarding digital payment processes, what do you think cash payments, Blockchain and encrypted currencies will achieve regarding transparency and ensuring that each party implements his tasks properly?



**Mr. Khalid Saad:**

I think with mobile phone services and other digital devices, transactions have become easier. Regarding the Blockchain, we find that money transfer companies



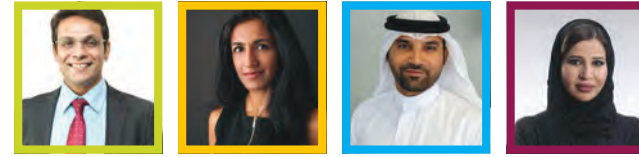
put exorbitant fees, and this occurs in traditional financial institutions.

I think it is time for transformation to perform such transactions on a cheaper basis, easier and more sustainable.



**Dr. Ayesha Khanna:**

Talking about payment, we want to look at the place where people find it easy to perform the payment. There are several factors that affect the issue of payment; first of them is transportation.



**Mr. Naimish Shah:**

Solving customers' problems comes in the first place, and then comes technology, Blockchain and others.



**Moderator:**

Are there concerns regarding the future of financial institutions and the traditional financial system? What are the hidden secrets of the future?



**Mr. Naimish Shah:**

I think we will see open banking in 2030, where the bank is going to be transformed into a platform to sell accounting package or buy an account.



**Dr. Ayesha Khanna:**

I think we will see more development and growth in many Asian countries, including Singapore, Philippines, and Indonesia ...etc. We see huge growth in endeavors of traditional banks to innovate and transform into digital services, in addition to the growth of startups in FinTech.



**Mr. Khalid Saad:**

I think the transformation that we experience now will change our way of thinking regarding dealing with things. Technology and knowledge will keep developing.





# 2018 قمة المعرفة | Knowledge Summit



2018 Knowledge Summit | القمة المعرفة

خالد سعد  
الرئيس التنفيذي لمركز البحرين للتكنولوجيا المالية  
أبوظبي

**Khaled Saed**  
CEO Bahrain FinTech Bay



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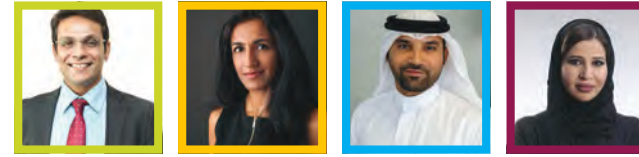
د. عائشة خانا  
المدير التنفيذي لشركة ADOO AI

**Dr. Ayesha Khanna**  
Co-Founder and CEO of ADOO AI



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**Mrs. Raja Al Mazrouei:**

I think we will see more startups in FinTech. Moreover, FinTech will occupy 8% of the financial sector services within the next five years.

**Attendees' Questions**

**One of the attendees:**

Will encrypted currencies replace banking transactions?



**Mr. Naimish Shah:**

I do not know actually if banks would adopt the encrypted currency or not. However, in recent time, I think credibility in this regard is extremely low.

**One of the attendees:**

Does FinTech represent a central hub to incubate startups? Are banks responsible for the protection

of individuals' investments and warning them regarding loss?



**Mrs. Raja Al Mazrouei:**

FinTech is using technology to create new products and services in the financial services sector.



**Mr. Naimish Shah:**

I support the issue of ethics in the field of banking, where customers' investments have to be protected and customers shall be warned if it is expected to have any shortfall in their revenues.





# know talks

THE TRANSVALUATION OF ALL VA







## Day 2

# Know Talks Hall



## Day 2

# Know Talks

### Session 1

## AI & Machine Learning

#### Topics

- What is AI? Automation? Deep- Learning? Machine Learning?
- Understanding what AI is not.
- How have AI systems become part of our everyday life?
- Who produces Knowledge in our knowledge economy?





Adam Greenfield  
London UK  
ag@urbanscale.org

Knowledge Summit  
Dubai UAE  
December 6th, 2018







## Speaker

**Mr. Adam Greenfield**

**Founder of Urbanscale**

An American writer and world-renowned urbanist, an Architect for Razorfish in Tokyo, the Head of Design Direction for service and user interface design at Nokia's headquarters just outside Helsinki. He is the author of the groundbreaking «Everywhere: The Dawning Age of Ubiquitous Computing» and «Radical Technologies: The Design of Everyday Life».



We will talk about AI and the phase of post-production of human knowledge. We will begin with the definition of AI. When we discuss this topic, some people think that we mean robots, but AI does not mean robots. Here we point out what drives and controls robots and many other things in our lives.

What do Algorithms do for us? Algorithms are used in many aspects of our modern world. They are used in distinguishing patterns, detecting false values, automatic vision, speech recognition, natural language processing, and guiding automated vehicles that will be outspread in the coming years. In addition, they are used in credit rating, life partner selection, traffic management, crime prevention, weather modeling, water protection and risk assessment. Algorithms may also be used in self-operating weapon systems,

automated message chain recognition, target identification, and many other applications that we use in our modern world. Humans cannot invent all these applications, and this is very important. What algorithms do in terms of exposure to machine learning is an abstract version of the world. If you are a surgeon, a truck driver or a creative artist creative, there is a pattern for everything you do. Machine learning is equipped with the feature of extracting patterns from what we do and putting them in the form of transferable instruction set. They can be taken and downloaded to self-driving vehicles or any other robotic system that uses these algorithms.

For example, we have an industrial robot MH24 and a man who spent twenty-five years learning to master laido, «A Japanese martial art that emphasizes being





aware and capable of quickly drawing the sword and responding to a sudden attack». There is no doubt that this man did not consider the laido as a martial art only, but he saw the goal of laido in reaching the highest level of spirituality and the way of understanding the mystery of the universe. He saw laido from a deep spiritual point of view. The man was asked to wear a suit for motion capture, and interaction began with the said robot for several days while wearing the suit. There was a possibility to transform all teachings and moves of laido to transferable instructions that can be installed on the robot. By this way, the robot performs all laido moves except the spiritual side. When the man uses the sword, he is trying to represent the nature of the world. However, the robot performs the material moves in a way that is similar to the laido fighter without the representative side. The robot has no soul to express. In other words, the understanding of the

robot does not fall under the human nature; it works according to the installed set of instructions. Definitely, the robot performs moves in a way that may excel the laido fighter without stopping because electronic systems in the «post-human production knowledge» can mimic human behaviors and actions based upon algorithms. Algorithms seem to be responding to our values and endeavors, but the matter is related to another perspective of perception and motives.

Another example is a project entitled «Next Rembrandt», which was under the patronage of the ING Bank. The purpose of this project was to revive the cultural heritage of Rembrandt, an artist of Dutch culture. They wanted to understand what algorithms can do to revive this cultural heritage of Rembrandt by launching a new printed three-dimension portrait using a program that simulates the style and works in the same way of the famous Rembrandt. The face-rec-





ognition algorithms software was provided with about 400 famous portraits of Rembrandt to identify and classify the most common geometric patterns to draw human features. The algorithm worked on distinguishing the number of people in portraits, the distances between their eyes, directions of their looks, and colors of their clothes. Ultimately, algorithms helped us to provide new creation of Rembrandt several centuries after his death. This was like a new implementation and presentation different from our vision and understanding, besides those algorithms that succeeded in introducing.

When someone tells you about «Algorithms-related accountability», it is absolutely wrong, because whenever the more AI and use of algorithms are developed, the more impenetrable things for humans are produced. We cannot- even in terms of principle- interpret the work method and motives of algorithms. The work of algorithms is based on the development of patterns in a way that breaks the relation between inputs and outputs. The problem lies in that we do not understand technologies to use. It is enough to know that the world is open for new ideas and technologies. We are at the beginning of the post-human production knowledge age. Information and knowledge will be produced by systems that work according to logic and not by us nor anything else like us. This can be in a manner that we do not understand and is beyond

our abilities of perception.

We have to remember that all forms and applications expected in the post-human production knowledge age are ultimately a human production. All sets of instructions and applications that algorithms process are the result of human aspiration for categorization, sorting and the desire to include things within those categories. Eventually, the production of algorithms will be a reflection of our thoughts. Therefore, we should not use human favoritism and bias, as it may lead to negative results when algorithms use them in this form. When machines start to arrange and classify our lives, we have to be careful about our thoughts, which may be subject to processing of algorithms, as they may be our last hope. We have to be keen on preventing the practice of bias and favoritism, in addition to preventing repetition using algorithms. We have to be keen on evaluating values on a different basis. There is no doubt that the more knowledge machines produce in our world, the more we lose control and the ability to understand. From this perspective, we have to be careful about the way algorithms spread in our world. If we are not careful, we will find ourselves in a strange world that we do not understand. In addition, in cases where our values should be evaluated from a different perspective, the following question remains: What can we achieve as a result of this process?





# Day 2

## Know Talks

### Session 2

## Intangible and Intellectual Capital

#### Topics

- What is IC- Intellectual Capital and Intangibles?
- Leading Nations on IC.





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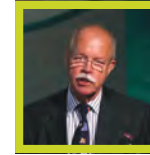


## Speaker

### Professor Leif Edvinsson

**Professor of Knowledge Capital at Lund University, Sweden**

Professor of Knowledge Capital at Lund University, Sweden. The world's first professor on IC at Lund University as well as Polytechnic University in Hong Kong. In 1998, he was awarded the UK's Brain Trust «Brain of the Year». He was listed in the «Who's Who» of the world.



We live in the industrial age, which is an old thing. We shall find another thing and this depends on the investment in intangibles.

When talking about the influence of the national intellectual capital, we find that it ranges from 17% to 72% of the GDP. However, countries that use intellectual capital better maintain the stronger influence of 70% of the GDP. This is beyond the scope of the traditional map and we need to develop new maps.

We can develop maps to identify gaps to see how politics affects the future. For example, what the pilot does to predict the weather to know the proximity of strong wind or a hurricane, then he can navigate according to the rotation of the Earth and other factors. We need a new approach of navigation that considers the following six areas: Human Capital, Structural Capital, Market Capital, Organizational Capital, Renewable Capital and Operation Capital.

How long can human capital work? In fact, human capital cannot work for more than four hours. Medical researches state that the optimal duration is four hours. However, the idea lies in changing the action that we do and the space where we work as we can double those hours two or three times; which means doubling productivity. Here appears the pattern that shows the need to move from a structural capital to another. This structure may be the office then the future museum, then the playground with younger generations. Then, you will have three different spaces to set up your own value, the thing that increases the contribution in the GDP.

What do we mean by structural capital? It is all that you leave when you go home; it never sleeps. You are a human capital, you can sleep, but the structural capital cannot.

The structural capital is more important from the







viewpoint of investment, productivity, production increase and revenues. Accordingly, we have to search for the structural capital of the future. The structural capital of the future will not be shopping malls nor big houses; it is something else. It may be the infrastructure of education, telecommunications, or science. Now, there is infrastructure for science, which has not been built yet. We have to build it. Accordingly, the benefit will be in the organizational capital, and sometimes it is called «launch effect». We can say that human capital is doing the thing in a few hours, while the structural capital never sleeps. If four-hour human capital is combined with the launch effect, a 24-hour result can be obtained. For that reason, measuring the structural capital is more important than measuring the human capital. The human capital represents dynamic thinking; i.e. the mental power that may lead to new communities.

Now, there is a correlation between mental works and functions. In Dubai, we have several works of opera-

tions and until now we do not have mental works. This may be the core of research process in the future. If we have the desire to invest in this field to plan financial works, we should look at the scale that was prepared several years ago. For example, Spotify Company in the USA has 3000 employees, while it has almost 150 million customers on daily basis. These are the mental works. The matter is related to communication through legal contracts to allow the flow of music and some people call it the music industry. However, it is not like that as it is legal innovations to publish music rights. This is really the so-called mental works. The matter is like types of legal entities that represent revenue not to a company like Spotify only, but to most music publishers.

The future lies in innovations that we provide. Innovations must be provided in an appropriate legal framework. Innovations could be mental outputs, and once they exist, they start to flow in the form of ideas. In Knowledge arena, we are dealing with ideas. In order



to circulate these ideas and innovations, they should be placed and covered within a framework through standard industrial classification, and not traditional statistical indicators. This may lead to an evolution since it is a mixture of different circles, starting from human capital to operation capital.

There is a very important point. The statistical inputs do not help when preparing new maps because they rely on industrial thinking. For example, we have statistics on the number of working hours, but we do not have numbers related to good ideas. There is a good example to learn from in this regard, i.e. Singapore. It works very successfully with regard to innovation in the field of development, especially the political development. Therefore, we have recognized that there is no time to sleep. Let us leave the structural capital to tell us about the beauty of the future, start looking for new allies and maps, in addition to inviting the young generation to communicate.

### Attendees' Questions

#### One of the attendees:

There is still a difference in organizations regarding the definition of knowledge management and measurement, in addition to finding a point of convergence between the expectations of management and its objectives regarding knowledge management and the way that employees deal with those expectations.



#### Professor Leif Edvinsson:

Knowledge management has the intention to recycle the old shape, so it is very important to move from navigation into knowledge. Now, the question is: What is the optimum method to navigate through knowledge into the future? The industrial management pushes the world to move in a straight way to navigate through knowledge, knowing that in order to navigate, you should go according to the wind and adapt yourself accordingly.

#### One of the attendees:

What do we mean by mental works?



#### Professor Leif Edvinsson

It is how to turn ideas into value, as it is concerned with managing ideas and getting benefit therefrom.





## Day 2

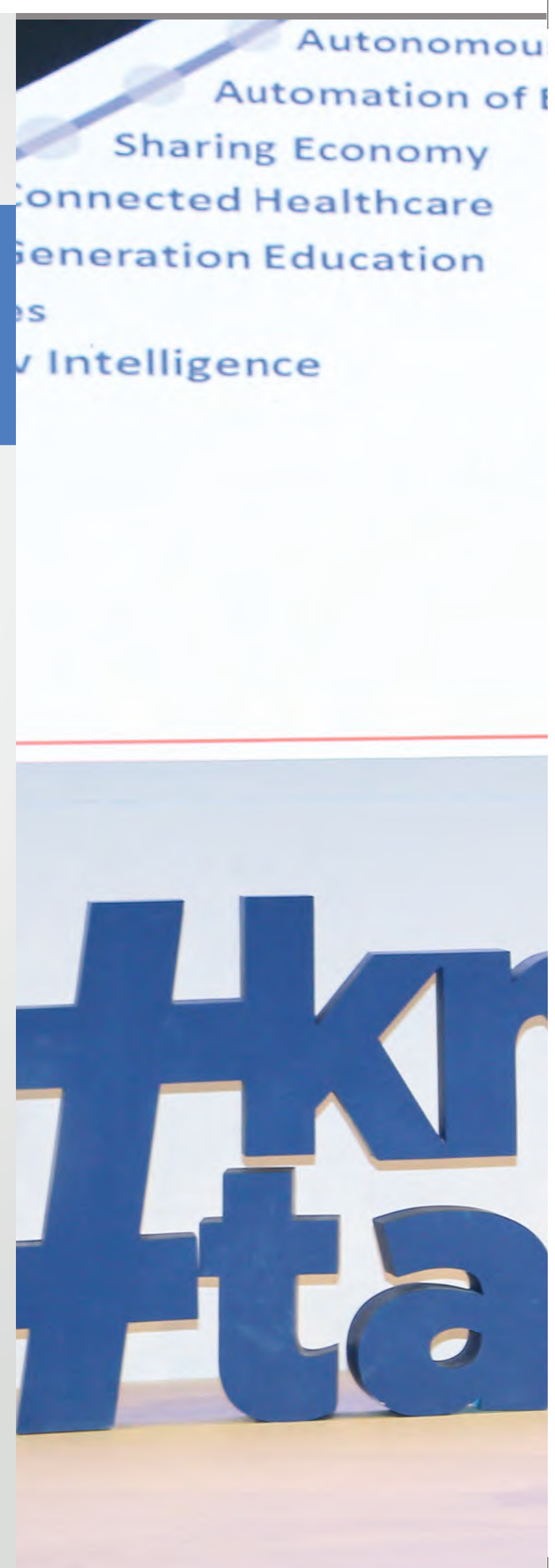
# Know Talks

### Session 3

## The way to accelerate innovation

### Topics

- How to identify weak signals early in business and society?
- How to find in-between spaces for innovation?
- How to initiate rapid prototyping?



s Vehicles  
Everything

— e Scenarios  
— Innovation Accelerators  
Foundation



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## Speaker

### Professor Jan Stureson

#### Founder of RESTING – Advice from the Future

Jan Stureson is a strategic advisor, international public speaker. Jan is also the senior knowledge advisor on strategic development regarding the smart city and future of social projects in Sweden, Norway and Brazil. Additionally, he has been advising «UNDP» on a project which focuses on the future of the Global Knowledge Index during 2017.



The word «innovation» comes from «renewal» and the way of renewal. How do you renew your future? How do you renew your work? How do you renew your personality? We need renewal and change for the best. We have the following questions: Do you foresee the future? What do you want? Do you have a goal to achieve in life? Why do you do that? Why is it necessary to take actions? What should you do with the strategy when it is about timing? Are they mature enough? Can I proceed now? Can I innovate and explore it, then try to accelerate it afterwards? Who will do that?

These are the key questions and then we come to the next step, which is taking the weak signals. On considering signals and understanding things from data, we should retreat a step backward and look at the picture from another perspective; and then we will recognize the result. This is innovation.

We need to obtain a future idea through the smart utilization of the past. I think that the most important thing in innovation is to accelerate or develop reliable relationships between generations through collaborative learning. Innovation is a shared responsibility between generations. It is important to find a way to take advantage of the future and learn from the past.

What is the importance of innovations? Is it building houses? Yes, it is important to start thinking of

establishing and designing those new apartments and properties that perfectly match the new business models; as we shall have vertical integration with horizontal integration and provide a new model through merging spaces with classical things to be innovative. We should obtain new points of view, what is the new perspective? Those people who lived in Sweden used to draw maps and put Sweden in the middle. Then a new perspective of the people who lived in New Zealand appeared and they put New Zealand in the middle. The perspective has changed and Sweden became in the far North-West instead of the middle. This is the market, it may be affected by the principles of management, leadership style, innovation philosophy or the change of innovation ecosystem. What is the perspective? Try to create a new perspective and take advantage of it. Think differently. It is not just ICT; innovation lies in every sector of life.

Innovation lies in healthcare and well-being, while in the past, it was about agriculture and fishing, but today it is about food and water. In the past, it was the public transport and air traffic movement, but today it lies in the movement, which is completely a different industry. The greatest problem that faced me when I was working as a strategic advisor, was that I found some of my enterprise and organization customers sometimes do not understand that their



rules have changed the industry. This is tragedy, because the world is changing rapidly and we need in this momentum to find new ways to create value for customers.

There is a competition in every city around the world in building the tallest building. Dubai is the winner in this regard. However, why do we not think of a different thing? Such as building a huge submarine that contains apartments and we go there by boats. Think differently. Change reality, if the world wanted to build at the top, you can build at the bottom.

The nature of innovation is unlimited, fast spreading, and expanding. The question is, do we create our consuming heritage in our business? What is my contribution? Have I participated in or created something new for my industry or my family? Or did I make new things? This is an important question. It is about serving your country, neighbors and customers.

The other thing is the tradition and addition. It is easy to imitate something and accelerate it by 2%. However, you can bring about a boom through adding, developing it for free, enjoying it and participating in its preparation.

Entrepreneurship is essential, so what is the definition of an entrepreneur? Is he the person who works in the basement of his house and invents a technical or electronic thing? This may be the case. He may be

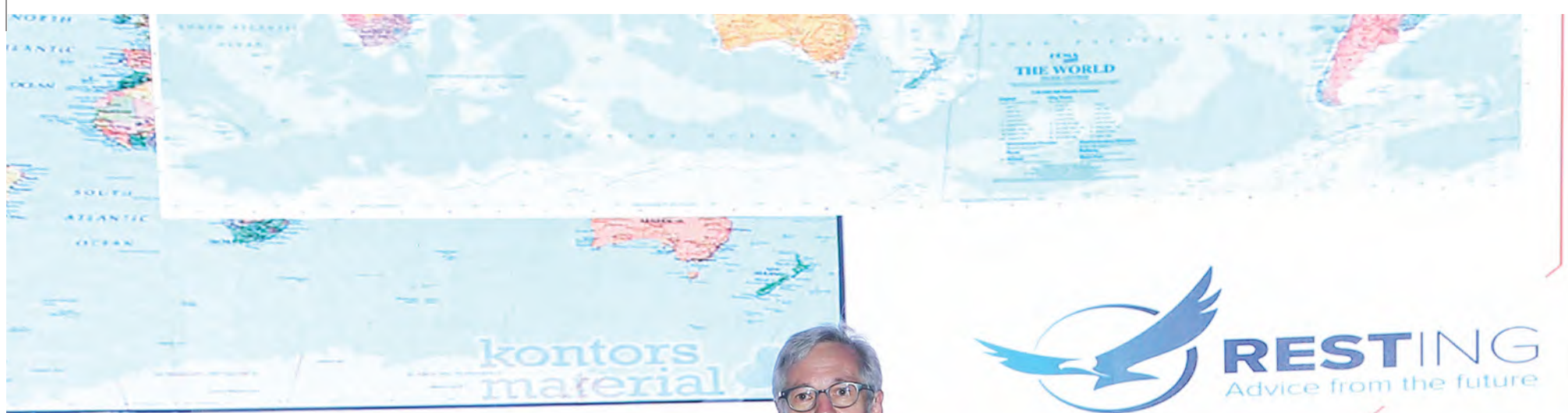
a politician, a social worker who helps the poor or a man who cares about society and creates an ecosystem or an academic person who provides leadership in knowledge.

What is the future of knowledge? Understanding the market and its needs, in addition to asking customers about their needs. Do not look only at the wishes of customers, but also you should have an innovative vision.

It is all about what you hear and then you realize your actual needs. Innovation is the recognition that the real need does not lie in our current products, but we can change them, change their shape and perform several other things, then adjust the following initial models. You have to make models and develop them constantly. Make new things, learn new things and make it consistent with the ecosystem. Can we imagine the future government model to provide data and information in an application on the store of small applications? I think that Dubai has made many strides in this area and its suitability to the environment. I wish you great success. I will say that there is no shortcut to success.

**We need to obtain a future  
idea through the smart  
utilization of the past.**





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## Day 2

# Know Talks

### Session 4

## Racing Towards Knowledge: Dubai Future Accelerators as a Role Model

### Topics

- A Vision based on Knowledge and Future foresight.
- Initiative Inception and Strategic Goals.
- Exponential Development and Success Stories.
- Fortifying the Stature of Dubai and the UAE.









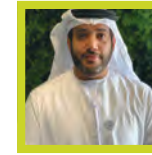


## Speaker

**Mr. Saeed Measam Al Falasi**

**Executive Director of Future Platforms – The Dubai Future Foundation**

He has worked as the Vice President (Business Development) at BinHendi Enterprises. He holds a Master of Science, Information Technology from Bond University Gold Coast, Queensland, Australia, and a Bachelor of Engineering in Computer Science from the University of Colorado, United States.



1971 is the year of the Declaration of Independence of UAE. UAE was established on internal and external knowledge. When His Highness Sheikh Rashid bin Saeed thought in 1972 to change the sea port and start preparing for the future, many of the operating companies in Dubai proposed airport expansion. His Highness wanted to equip the airport for the future and consulted many people, some of them advised him not to widen the sea port, and the others suggested expanding the sea port four times of its size, but Sheikh Rashid decided to expand the size of the port fourteen times! This is what we call acceptance of the risk, looking forward and preparation for the future.

Can you think of another type of infrastructure, which Dubai has built and developed in the past, making Dubai one of the leading cities of today? There are roads, smart cities and the airport. This airport is one of the world's largest airports. Today, everything that exists in Dubai did not happen overnight nor was it generated from nothing, but comes as a result of the

future outlook and new planning.

The government summit is held from February to March with the invitation of 300 diplomats from different countries. During this event, we used to make a small hall and call it (the Future Museum); a small area offering lots of ideas. Over five years, we have received 15000 visitors and 250 thinkers from all over the world.

When His Highness Sheikh Mohammed Bin Rashid Al Maktoum visited this museum, his first thought was: If you tell me this is the future, I would ask you have you prepared yourself to it? Did our government entities get prepared to receive and utilize this technology? This led to creating the Dubai Future Foundation. Our vision is to make the future and to be part of the human progress; therefore, we launched a variety of initiatives, some of which are based on creating healthy environmental systems that enable people to communicate and exchange views or use certain techniques, including (The UAE Drones for Good Award), and some relate to robots. In addition, we have collaborated with Dubai Police through the 10X project to monitor the city with no need to police officers. One of the most important initiatives we have launched is (Dubai Future Accelerators). These accelerators are applied in government bodies to change their way of thinking and work. The most important thing is to change governmental employees' way of

**We work closely with government authorities to start a partnership with those authorities, startups and small companies.**



thinking. We managed to do that, as we need government bodies to get rid of the perspective of service and regulatory bodies to become centers for future foresight and foundations that lead the global innovation movement to solve the existing problems and those of the future.

Accordingly, Dubai Accelerators care about three very important things: The first thing is contribution by making Dubai a global hub for examining the leading ideas and modern techniques.

What we actually do at Dubai Accelerators is providing modern technology to government bodies to work with it and change their way of implementing tasks. We work closely with government authorities to start a partnership with those authorities, startups and small companies. When we launched the first government accelerators, we had 7 government bodies, and today we have thirteen government bodies from Dubai.

The interesting thing is that when we launched the project, there were 191 companies that came to Dubai, 68% of which signed cooperation agreements with government bodies. The companies, which joined the project were from 27 countries all over the world, including 36 companies from UAE. We did not set limits for innovation. We have opened the way for everyone. Therefore, this work aimed at providing you and the city with new services based on inno-

vation and knowledge obtained from several companies that come to Dubai. Government bodies have already started establishing teams that work closely with these companies. Imagine, how much knowledge can be shared. We do not benefit Dubai only, but also government bodies and future teams that work on those projects

### **Attendees' Questions**

#### **One of the attendees:**

What is the difference between Dubai Future Accelerators and the UAE Government Accelerators?

#### **Mr. Saeed Measam Al Falasi:**

The difference is simple, it is the name. Dubai Accelerators work exclusively with Dubai Government and the government Accelerators are subordinate to the Federal Government. They focus more on inter-operations they perform with the various Federal Government authorities and we focus on technology to enhance our operations.

#### **One of the attendees:**

How are government bodies linked with other foundations such as the Dubai Future Foundation? I am asking about the strategy.





**Mr. Saeed Measam Al Falasi:**

I think every government body knows its own strategy; they know the way they work more than any one of us. However, we work closely with those bodies to prepare different workshops, to be on the same level of perception and thinking about the coming challenges.

**One of the attendees:**

Do government bodies actually provide solutions for existing or future problems?

**Mr. Saeed Measam Al Falasi:**

Government bodies benefit from modern technologies to solve future problems, not only the existing ones. Therefore, new solutions are innovated for today's problems to pave the way for the transition process to the future.





## Day 2 Know Talks

### Session 5

# The FinTech Disruption: Using Artificial Intelligence to Reimagine Banking

#### Topics

- The four trends that make financial services vulnerable to disruption.
- Why artificial intelligence is the key underlying technology for FinTech products?
- How existing banks can reinvent themselves to pivot towards FinTech and innovation?

Co  
to



**Companies are taking advantage  
enter new domains with data.**







## Speaker

**Dr. Ayesha Khanna**

**Co-Founder and CEO of ADDO AI**

Ayesha spent more than a decade on Wall Street developing large-scale trading, risk management and data analytics systems. She was co-founder of the Hybrid Reality Institute and directed the Future Cities Group at the London School of Economics. She has been a Faculty Advisor at Singularity University.



We passed many points of evolution, Neolithic, Agricultural, Industrial and Knowledge eras, while we now live in a different era, which we can call it «the hybrid era».

In the hybrid era, everything is provided closely and fully through technology. What we want to think about is that companies now benefit from entering into new ranges through data. We need individuals, companies and governments so that we would think about the advantages of using the techniques and hybrid age features. For example, the current population of Pakistan is 260 million, less than 50% of them only have bank accounts, and we can imagine that the total suspended residential mortgage in Pakistan is 60 thousand only. Such cases are a huge opportunity for banks or companies to provide banking and financial services to hundreds of millions who do not have bank transactions in Pakistan. However, banks were not innovative and did not think of the future, as it should be at that time.

Norwegian Telecom informed the banks of the necessity of recognizing the magnitude of available opportunities, where they realized the existence of hundreds of millions of subscribers and even allowed them to make payments by the microfinance operations through the bank that was bought by them. They began a process called

«easy money», and made payments from pharmacies to local shops, restaurants, and others, even in the absence of a bank account or credit card, and this process became very vogue. When China thought about entering the market in Pakistan and took advantage of this opportunity, it did not hold a partnership with the largest banks in Pakistan, but held a partnership with the Norwegian Telecom. I think that Asia and the Middle East represent tremendous opportunities for the number of people in Southeast Asia is 622 million, in addition to the European and Asian companies that come to sell operations in the entire Eastern Europe.

Let us think about financial services. There is a leap in FinTech; however, FinTech is just the beginning. There are many things, which people do not like to do and want to be automated, such as reviewing legal documents. For example, KIRA system achieved \$50 million in its first external financing round, as KIRA helps companies such as Deloitte to review its accounting leases. Each time you have a commercial property, you have contracts for related obligations, and the automated application starts to audit and pops up any errors that may exist. This application saves time for accounting and capital private firms to provide necessary attention and focus on other as-



pects of the transaction.

There is another issue, which is fraud and anti-money laundering, whereas the money laundering activity worldwide ratio is ranging from 2% to 5% of the gross domestic product (GDP), which represents a very large amount of money. Only 10% of suspicious transaction reports lead to further investigations. We use drivers based on the rules for decades in the field of banking, while we see many cases of fraud in insurance, financial markets and banks that we have never seen before, even in the field of E-commerce. For example, HSBC Bank uses panel that shows all transactions, which are classified into groups, and their grades shall be assigned according to the size of the risk, which warns individuals of the existence of a risk possibility in a particular transaction.

I also want my artificial intelligence agent to understand me. Of course, the artificial intelligence does not have feelings and emotions, but it can do some things. For example, in the case of a riot, a revolution, a banking crisis or a plague, we know that the stock market is affected by such events.

**The use of artificial intelligence in the FinTech field does not mean dispensing with the human jobs.**

In these cases, we find that analysts are preparing their own models to analyze these crises. There is a company called Kensho that enables you to inquire about the major events that may occur in the event of a disaster, and help you provide the necessary expectations on this subject, as it is considered a supporting point with respect to predictions.

The use of artificial intelligence in the FinTech field does not mean dispensing with the human jobs; however, it means re-skilling, where the people are supported by artificial intelligence, so that the transformation will be productive. Regardless of our attention to persons, we should know that this type of reinforcement, automation and disruptive innovation are coming.

I also think of new things in the field of financial services, namely the issue of trust and security. There are companies using artificial intelligence to ensure that individuals obtain the necessary service with confidence and security, for example, there is a chicken farm in China using artificial intelligence in an innovative way to ensure that the customer knows the history of the chicken's life from birth through the Blockchain network. The concept of this security did not exist before the existence of the deep technology, which allows us to innovate. The issue that concerns workers or entrepreneurs in the field of financial services is not how to start





using artificial intelligence, but the problem lies in the question: may artificial intelligence help me to solve a problem or not? In many times, we find that artificial intelligence can help us. Entrepreneurs think now about how to make use of artificial intelligence for our interests and the interests of customers. We possess sufficient knowledge and data

in the industry in which we work, enabling us to understand artificial intelligence logically and deal with it in a good way.

Everything in the future will use artificial intelligence, whether in the field of entertainment, law, restaurant management, conferences organization or other areas.





## Day 2

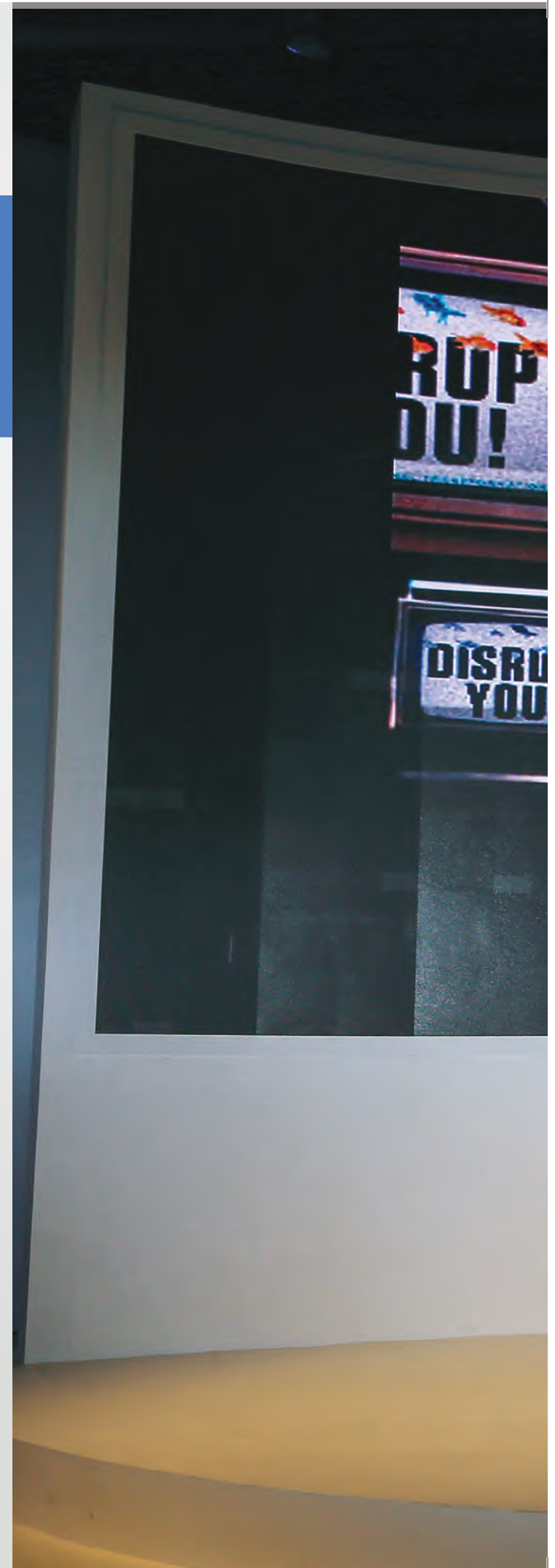
# Know Talks

### Session 6

## Preparing the Next Generation for the Era of Endless Innovation

### Topics

- How Exponential Technologies will disrupt how we Learn, Work and Live?
- The impact of Artificial Intelligence, 5G, 3D Printing, Blockchain, Augmented Reality.











## Speaker

**Mr. Jay Samit**

**Independent Vice Chairman of Deloitte**

A dynamic entrepreneur who is widely recognized as one of the world's leading experts on innovation. An adjunct professor at USC, Jay teaches innovation at America's largest engineering school and is author of a book entitled, «Disrupt You! Master Personal Transformation, Seize Opportunity, and Thrive in the Era of Endless Innovation».



Let's talk about accelerating technology. None of us shall be surprised when knowing that the largest hotel chain in the world does not have a single hotel! The largest taxi company does not have a single car, the largest media company in the world does not have any content, the largest retail shop does not have any stock and the largest growing currency does not belong to any country. However, they all share the benefit of using a huge amount of data.

Five things may change your lives. We will not focus on all accelerated changes, but we will highlight three accelerated variables that significantly affect UAE: Encrypted (electronic) currency, augmented reality and electric drill.

Doing things the traditional way is over, skilled labor is replaced by unskilled labor for application and program design. Accountants may lose their jobs completely because artificial intelligence can do their jobs. However, the idea of «I will work for twenty years then I become a partner» has already ended. Why? The answer is: Due to all kinds of fast-paced technology. Fifth-generation technology aims to transfer more data faster, and everything is subject to computing.

We come to the four shifts in the computing world: The first shift is linking to smart machines, second is

the Internet connects us with all the information centers in the world and third is that mobile phones have enabled us to obtain accumulated human knowledge of the past 40 thousand years. Furthermore, the augmented reality has brought all this data and put it on a screen.

However, Let us focus on one accelerating issue; the 3D printing. This technology will replace the 320 million jobs around the world! Imagine that a child was born without fingers, how will this affect his life and personality? But, with 3D printing, he can print an artificial limb for less than \$50. Moreover, cornea can be developed for the blind and nose can be transplanted. Therefore, we do not have to wait for donors or dead people.

Let us talk about the digital currency. In China, \$5 billion payments through mobile phones this year, they have surpassed the era of credit cards. What will happen to the currency if Amazon or Apple issued a coin instead of the Bitcoin? It does not know limits, reliable, rational and does not bring concern regarding the stability of the State. Money will move easily, smoothly and hand in hand everywhere in the world. It gives a solution for two billion people, who do not deal with banks. As time goes on, we will see a decrease in the number of countries that deal with its



coin, and an increase in the number of countries that use digital currencies.

What is the common thing among us? Data, 99% of data is not analyzed. We are expanding the accumulation of data and we have not analyzed it to see the important things. The most successful companies extract most of their business from data analysis; this is the secret of success! The available big data requires more innovation.

Let me explain why I am fascinated with augmented reality. In 2018, more than 18 million glasses were sold in the USA - the price of each one was more than \$100- through one application, which is called (focus), in addition to 15 million glasses from an application called (SUN). Therefore, you do not need to buy expensive glasses that do one thing. If I give you a pair of glasses that translate everything you see to an understandable language; you will buy it and this is what will happen.

Everyone thinks that augmented reality means adding things. However, the augmented reality is about determining things. If you visited the doctor and he told you that you are a diabetic patient. Moreover, you should not eat food that contains sugar; you can stand in front of a shop that contains thousands of products and say the following: Show me the products that do

not contain sugar, the products that contain sugar will disappear and the products that do not contain sugar will remain.

Now, there is my favorite part, the electric drill. We use electric drills for thirty minutes, so why do we own an electric drill if we can hire it? When we finish, we give it to another person; this is what we call the Sharing Economy. We should not seize things for ourselves, Uber and Airbnb are types of sharing economy. We will not need to consume lots of things, as we have the data that improves our needs. We will not need to move this drill and other things in boxes from one place to another.

What connects all this is a good consumer experience. In the future, the transportation service provided by Uber will be linked to the Netflix account, to know your watch list, journey time and suggests things to watch.

Now, most people put limits to their capabilities, and if the universe is limitless, this means our capabilities

**Start looking at problems in your life and in the world as opportunities. Remember, there is an obstacle that cannot be overcome.**





are limitless. Our parents and teachers have tried hard to protect us from failure; however, failure is the most important thing from which we can learn. Start looking at problems in your life and in the world as opportunities. Remember, there is an obstacle that

cannot be overcome. Success begins at the moment you decide to be yourself. The only way to do that is to continue learning throughout life. Finally, no one will hire you, unless you continue to learn. Keep learning and keep reading.



## Day 2

# Know Talks

### Session 7

## Entrepreneurship in the Age of New Space

#### Topics

- Scanning the sky: How my curiosity became my career?
- The Journey: From Stargazing to moon-reaching rockets.
- Challenges of operating in the space environment: Design, Testing, Funding, and Operations.





# Entrepreneurship in the Age of New Space

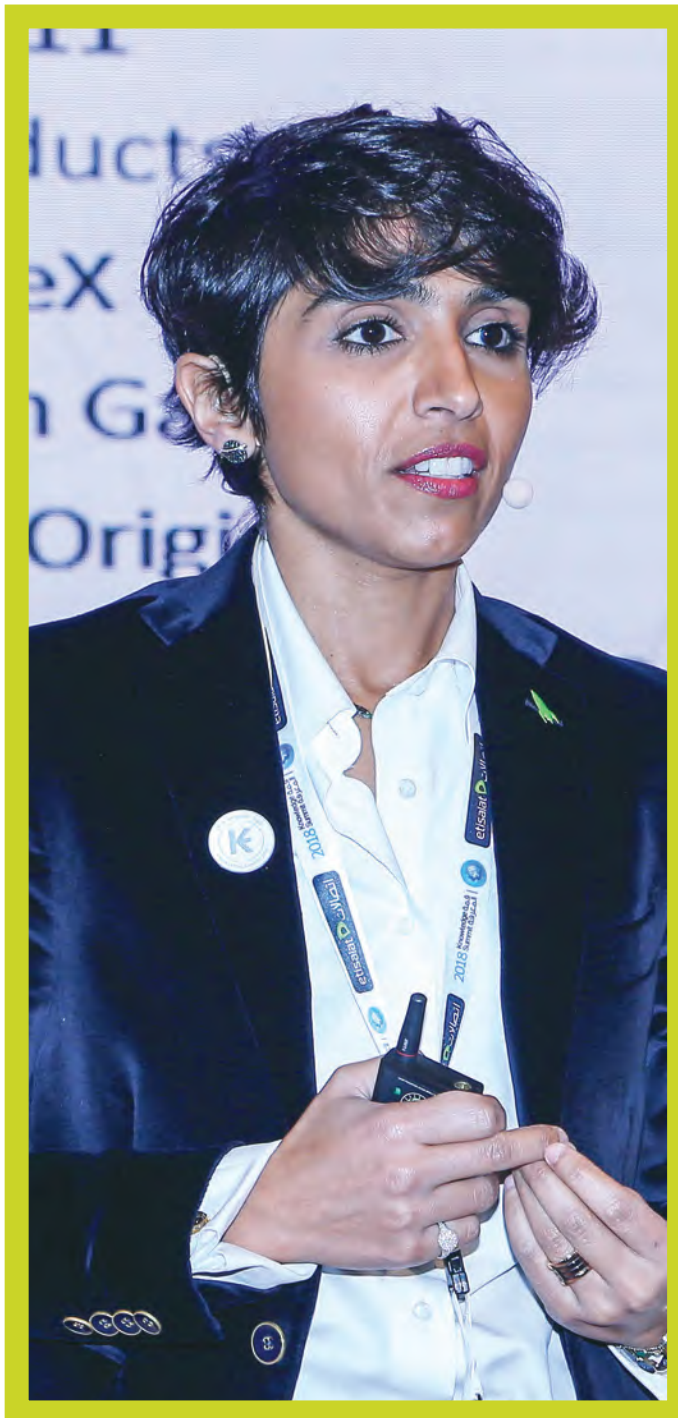
Mishaal Shemimry

December 06, 2018

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## Speaker

Eng. Mishaal Ashemimry

**Eng. Mishaal Ashemimry, First Saudi-American Aerospace Engineer and Founder of MISHAAL Aerospace**

An aerospace entrepreneur, a consultant in her field; she also worked for Raytheon Missile Systems' Aerodynamics Department and contributed to 22 different rocket programs.



My curiosity started in Unaizah Desert, where my mother decided to take me there. I began to wonder about the stars in the sky. Like any child at sixth, I was in desperate need to get answers, so I kept asking. From this time, traveling into space became my ultimate goal. To do that, I have to build rockets, and to build rockets, I have to become an Aerospace Engineer. Since that day my journey was started. I obtained BSc degree in aerospace engineering and the MSc, which was financed by NASA. My goal in this research was to design nuclear thermal propulsion rocket, a type of rocket designed to travel to Mars, and specifically to carry humans to Mars.

Do you know why USA took a decision to go to the moon? The Cold War was the starting point of this trend, as the Russians wanted to invade the space first and sent the first satellite (Sputnik) into space, then the first astronaut (Yuri Gagarin). However, the reaction of USA was if you travel into space, we would travel to the moon, whatever the cost. How much did the Apollo program cost? About 24.5 billion. It is a very huge number! Since 2000, the mentality has begun to change, especially after the Columbia accident in 2003, because all shuttles were outdated and cost a lot to be maintained

and operated, therefore this program should be terminated! However, this arouses entrepreneurs' curiosity to find out why the traveling to the space is difficult and very expensive! Therefore, new players such as SpaceX, Virgin Galactic, and many other companies were involved, trying to open up new prospects when it comes to the cost of traveling to the space.

What is the difference between the Aerospace field in the past and now? In the past, the concept was to achieve the requirement regardless of the cost, however the recent concept is to achieve what is required at lowest cost.

At the age of 26, I took the decision to establish «MISHAAL Aerospace», for designing and creating missiles. When I told my chief engineer and started to look at the market, we realized there was a large shortage of companies that would offer small satellite launch services. Small satellites business is a market that includes satellites weighing from 1 kg to 500 kg, which is our targeted market. We have two locations; the head office in Miami, Florida, it is for conducting simulation design, the second office in Arizona, which for conducting the tests.

Many people asked me, «How do you make mon-



**“Most importantly, you  
have to focus on achieving  
your dream, whatever the  
difficulties, because the  
failure is the seed of success.”**

ey? Are you selling rockets? » Usually I do not sell rockets to people, we make money through providing small satellite launching services into space using our rockets. Moreover, the life span of the satellite after launching is two or three years, so it must be replaced. Therefore, the owner comes to us to launch another satellite. In addition, the owner may want to launch a bunch of satellites to provide greater coverage. Therefore, you probably want to launch 20 satellites or maybe a hundred, according to your target.

When I established my company the people told me «You are twenty-sixth, what do you know about such project? Yes, I was twenty-sixth, but I prefer to try and fail than never to try at all!

When we started the company, we had an investor that fully funded the project, but he withdrew in the middle of the project. It is hard to convince someone to invest his money in a long-term project at

high levels of risks! However, we have completed our way in the development of these rockets. I looked for an investor for two and a half years. From my experience, I found that investors are two types. The first one does not understand the aerospace industry, therefore this type does not invest in this field, and the other type understands the aerospace industry and put investments in the SpaceX. Therefore, it was very difficult to find an investor. While I was having financial problems, some combustion chamber experiments failed, not once nor twice, but three times! The reason was the used material. Then we found the suitable material but we did not have the time nor the money to use this new one. I decided to test the experimental system, as we do not need to go to space, as all we need is to test the experimental system. Therefore, we went to the Mojave and prepared the rocket but the pump did not work, and we went back and got another one, but expect... What happened? It did not work!

Then our chief engineer said, «What do you want us to do? » I told him: I have two options here, success or death! Therefore, we tried so much until we succeeded. We got a number of initial contracts. In addition, we are manufacturing all parts.





So, why am I here and talking about that again? I have learned that I can design and create missiles. Despite the fact that I did not get an investor, but I hope they would come soon. At least I have tried. Maybe I have failed from an economic perspective, but I succeeded at the technical level. It may be difficult to accept starting something in bad tim-

ing! This does not mean to give it up, but it means that the market may be ready for it at a later stage. Most importantly, you have to focus on achieving your dream, whatever the difficulties, because the failure is the seed of success. Therefore, you shall be not afraid of failure; take the risk to achieve what you want.





## Day 2

# Know Talks

### Session 8

## Childlike Imagination – Rocket Fuel for the Knowledge Economy

### Topics

- Engaging the natural creativity of childhood as a primary resource.
- Linking systematic creativity with smart strategy.
- Aligning your organization around the pursuit of creative transformation.
- Maximizing the engagement and intellectual contribution of your workforce.







**Child-like Imagination:**

**Rocket Fuel for the**

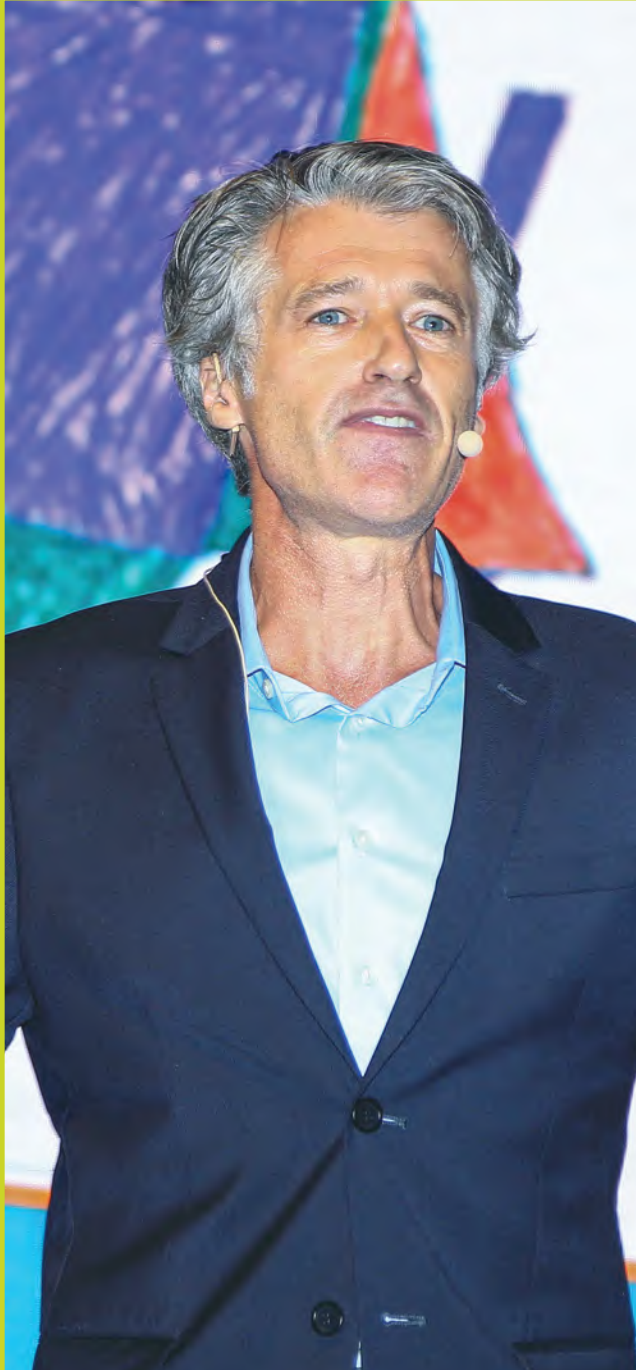
**Knowledge Economy**

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#HOW  
#THINKS





## Speaker

**Mr. Gabor George Burt**

**Founder of the Slingshot Framework**

Gabor has gained international recognition in the management world as a pioneer in the strategic perspective of «defying conventional wisdom», and a leading expert on the Blue Ocean Strategy. Additionally, he is a board member of the Global Innovation Institute, and works with executive teams of multinationals, SMEs, government agencies, NGOs and startups.



Creativity and imagination that we have as individuals and institutions are the most important resource for us. I will focus here on natural childlike creativity, and point out that innovation is the typical implementation of the knowledge economy, whose one of its features is that when we hear about the innovations, we do not know if these innovations are available, under implementation or just an idea. As we are in a volatile and unpredictable world, the term (VUCA) has been created to describe or reflect general conditions, volatility, uncertainty, complexity and ambiguity situations.

In a survey conducted by IBM, CEOs from all over the world and of all areas were asked to answer this question «What is the most important thing that shall be existed to enable CEOs to achieve success? » The first choice was «creativity». No one spoke about recognizing the business area or methods of negotiation during the implementation of the work or employees' skills. However, most of them spoke about creativity and its importance to achieve success.

In another survey, they asked a question about the

importance of creativity, where 98% of respondents had chosen the opinion of creativity importance, 45% felt they were creative and only 2% think that their work environment boosts creativity. This means that we are creating creativity but we cannot see it and we may not be able to apply it.

As for the link between humor and creativity, we have to know that one of the creativity features is humor. Forward-looking companies recognize that possessing a sense of humor in institutions could establish creative environment and adapt the conditions for natural creativity that stimulates innovation to enable your organization to achieve success.

This is interesting, but let us link this approach with the childhood. Studies have shown that children laugh 400 times per day, but how often do adults laugh a day? More or less? People who are over the age of 35 laugh only 15 times a day and could hardly smile at work.

Thomas Edison, who is considered one of the greatest innovators and inventors, had been asked about the greatest innovation ever. He answered without hesitation and said it is the child's imagination. It is interesting.

One of expert customers said, «What we need to know about innovation may have been learned by

“ **The reason behind artists' success is their adherence to childhood creativity and their ability to do things accordingly.** ”





us in kindergarten before sixth. » We all are able to innovate. That what makes us think that the reason behind artists' success is their adherence to childhood creativity and their ability to do things accordingly. For example, the Bengali Muhammad Yunus, the winner of the Nobel Prize and one of the microfinance pioneers, who worked on a project that provides the possibility of lending money to the poor people in a profitable way, said that the biggest challenge that faced him was to change people's mentality. If we confined ourselves within limited ideas that are imposed on us, we will not be able to look to ourselves as innovators within the environment that we live in. It is all about our ability to re-imagine the border around us.

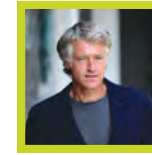
Children's minds have the flexibility to break rules, and reach new ideas about the world, but why does this not last forever? Actually, it lasts,

but we do not realize it.

There are five questions, which we have to direct to ourselves to identify our position in the creativity scene. Firstly, which animal can represent your organization? If given the choice between the lion, eagle and platypus. I think the majority will choose the lion or eagle, which means that you focus on the competition and how to be strong in the market. Otherwise, choosing the platypus means that you more focused on creativity, innovation and to break the restrictions around you and trying to get away from what you are familiar with!

The second question is «how does your organization work? » What we do depends on knowing what people actually want from life. In that, I would like to refer to Dave Grossman's statement that says, «The human equation is to multiply the joy and divide the pain. Pain shared is pain divided; joy shared is joy multiplied.»





This shall be every company's target. I think that focusing on this will keep your existence in the future and will enable you to reconsider what you are doing. I think that the principle of participation will strengthen relationships with the target groups, so that it is not limited to making a deal or something.

The third question is «who your competitors are? » Which one of us may answer this question differently, i.e. not to mention specific competitors, but to think about what occupies the hearts and minds of the target groups, such as artificial intelligence, survival for a long time and changing the world. I think this way of thinking will be effective, as this is the concern of your target attendees. The more you link what you are doing with this ambitious and endeavor, the more you occupy a part of their minds.

The fourth question is «what are the starting and ending points of the customers' experience cycle within your proposals? » I think the best answer is that customer's experience has no beginning or end, as it is an extended experience throughout the twenty-four hours. It is about the participation with your target attendees in pain or joy. The more you focus on your customers and stay in connection with them, the more you will have an important position in their opinion.

The fifth question is «on a scale of 1 to 10, to what

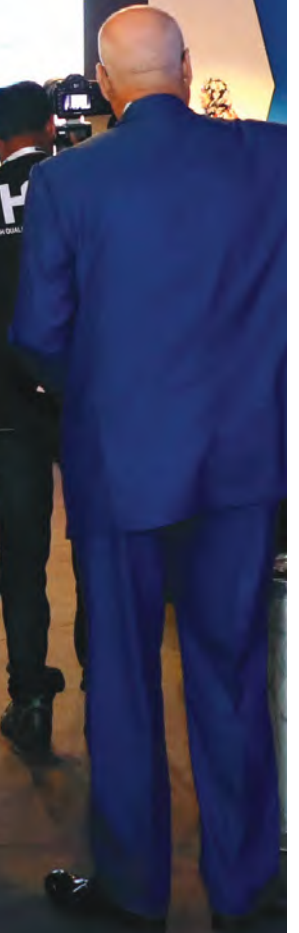
extent is your customer's satisfaction linked to your strategic success? Customer satisfaction is important for companies, but it is dependent on accessing what you want, either worse or better. If you want to transform your target attendees to fans for your services and products, they must feel more than satisfaction. Companies that do so will achieve success and outreach, leaving the rest companies behind.

Let us talk about Slingshot Framework. It is a tool that aims to reactivate our natural creativity, which we have learned as children. This framework relates to three key points that reactivate our ideas. We shall search for the weaknesses of our relationship with the target attendees, and instead of trying to treat or repair these weaknesses, we should transform them to joy and pleasure. This means to turn weaknesses into strengths, and reassess the value that you provide for customers, expanding it, and searching for the shortcut to creativity, understanding and re-arranging it again. It is possible to look for new combinations of existing components.

There is a statement that indicates that companies are not searching for opportunities to make their customers happy, but to create these opportunities. Moreover, I think we must look for pleasure and delight of the customers, not just their satisfaction.



# مصنع المعرفة KNOWLEDGE FACTORY







## Day 2

# Knowledge Factory Hall





Day 2

# Knowledge Factory

## Session 1

### Efficiency of educational systems and youth effectiveness

#### Topics

- Differences between quantitative and qualitative dimensions in the performance of the educational system.
- The gap between the inputs and outputs of the educational system.
- Current challenges to technical education and vocational training around the world.
- Economic challenges to technical education and vocational training.







## Speakers

### **Dr. Najoua Ghriss**

Professor at the Higher Institute of Education and Continuous Training in Tunisia

### **Dr. Youssef Sadik**

Sociology professor, Head of Educational Institution at Mohamed V University, Morocco

### **Dr. Zubair Shahid**

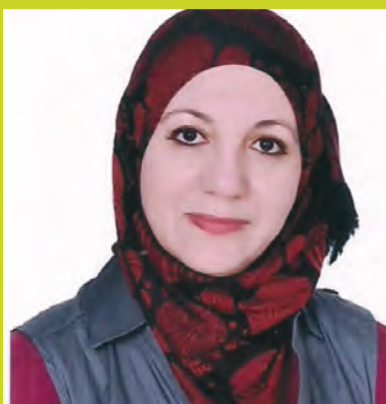
Knowledge Development & Regional Focal Point MENA (UNEVOC Network)

## Moderator

### **Mrs. Ghiwa Ibrahim**

Journalist and News Anchor





**Dr. Najoua Ghriss**

**Professor at the Higher Institute of Education and Continuous Training in Tunisia**

She is a member of the Tunisian Association of the Academic Pedagogy. She holds a PhD in Educational Sciences jointly from the University of Tunisia and the University of Louvain-La-Neuve Belgium. In addition, she is a research associate at the National Center for Pedagogical Innovation and Education Research in Tunisia.



**Dr. Youssef Sadik**

**Sociology professor, Head of Educational Institution at Mohamed V University, Morocco**

Research Associate at the Center of Migration, Diversity and Citizenship Research at the University of Quebec in Canada. Dr. Sadik is a researcher at the Laboratory of Understanding the Contemporary World at the University of René Descartes. A graduate of the Institute of Political Studies in Paris.



**Dr. Zubair Shahid**

**Knowledge Development & Regional Focal Point MENA (UNEVOC Network)**

He holds a PhD in Development Economics, a Master in Public Policy, and an undergraduate degree in Finance. Dr. Shahid has five years research and programming experience in the areas of governance and social policy, which have included the World Bank, United Nations and Global Development Network (GDN).



2018 Knowledge Summit  
المعرفة قمة 2018





**Dr. Najoua Ghriss:**

My presentation is about the practical study I carried out depending on the Global Knowledge Index, launched in 2017. The study attempted to give an analytical overview of pre-university education development.

The pre-university education index consists of two main aspects:

1. Knowledge Capital: In that part, we focused on enrolment, completion and outcomes.
2. Enabling environment for education: To consider the issue of spending and early childhood programs and school environment.

After obtaining the overall results, we tried to analyze the results that emerged globally. Later on, we focused on the results of the Arab region. When we compared the results of the University Education Index and results of the Arab region to the results of the developed countries and the world average, we found that the average of developed countries is %72.43, the global average is 55.72% and the average of Arab countries is 49.21%.

If we focus on the Arab region, we will find it in the penultimate position, before sub-Saharan Africa, and we did not even reach the minimum which is 50%, while the best performing regions were the Economic Cooperation Area.

If we focus on the Arab countries, we will see a huge

gap. We tried to shed light on specific Issues and the first prominent issue was the gap between the qualitative and quantitative dimensions in relation to the performance of the educational system. When we compared the outcomes and the goal of the educational system to the rate of students, who successfully completed the educational stages, we found out a huge gap between the completion rate and the outcomes, whereas the outcome was almost under 50% and the completion rate recorded 90% in the same countries.

We also found out another large gap in the Arab region, a gap between the educational system inputs in terms of the enabling environment, expenditure etc. and the outputs as the Knowledge Capital. We also noted another gap which is: we prepare the enabling environment and spend enough money in some countries, but ultimately, we do not get the knowledge capital! By the same way, we counted the Efficiency Index, and the average in the Arab region was (0.6) compared to the international cooperation area, which exceeded the ratio of 1%.

If we only talk about these two points, we have to recognize that the enrolment and completion do not necessarily mean learning, so the efficiency of education is not measured by the number of years. In the Global Knowledge index team, we faced a great difficulty in finding data concerned with qualitative







aspects. There are no reliable international studies other than TIMSS and PISA and PIRLS to tell us about the acquired skills, and these studies do not involve all Arab countries.



**Moderator:**

Why there is no interest even though it has an impact on the economy?



**Moderator:**

WHY?



**Dr. Najoua Ghriss:**

Maybe because it is expensive or because of the lack of interest.



**Dr. Najoua Ghriss:**

For several factors, including cost. The World Bank was offering aid to cover the expenses of these studies.



**Moderator:**

Here comes the role of ministries and educational institutions.



**Dr. Najoua Ghriss:**

The problem goes beyond that, it is a social culture.

**Attendees' Questions**

**One of the attendees:**

As for schools, which select their students based on achievement and the level of intelligence, is this correct?

“ If we have a group of people having difficulty in learning, today there is a cure for them. ”



**Dr. Najoua Ghriss:**

This is incorrect. Teaching methods speak about different aspects of learners who provide different methods of learning. If we have a group of people having difficulty in learning, today there is a cure for them.

**One of the attendees:**

You spoke about accountability, schools assess themselves by giving students high scores. UAE has taken advanced steps in this area through creation of the UAE School Inspection Framework.



**Dr. Najoua Ghriss:**

This is the target of this Index, having knowledge of good practices. We came up with many recommendations from successful experiences around the globe and apply them in the UAE.

**One of the attendees:**

How can countries benefit from the Global Index, taking into account that many countries did not provide adequate data?





**Dr. Najoua Ghriss:**

We do not receive information from countries but we resort to international organizations that have unified documented data taken from official sources in those countries. We take data from the UNESCO Institute for Statistic indicators which collected this data from UNESCO offices in countries.

**One of the attendees:**

How can the participating countries benefit from the Index?



**Dr. Najoua Ghriss:**

The Index depends on general statistics only, and any country can use it to make other analyses.



**Moderator:**

Dr. Youssef Sadik will tell us about the challenges facing vocational and technical education, and we will begin with the strategy of the UNESCO 2025.



**Dr. Youssef Sadik:**

Vocational and technical education is relatively weak in the Arab education. Today we are going to make an analysis report of the Global Knowledge Index 2017, which means that the results we will present are the results of the last year. I will give you a preview of the Technical Education Index, which consists of two main aspects: Vocational training and features of the labor market. For vocational training, it consists of continuous training, composition structure, training and qualifications. As for the features of the labor market, there are other qualifications, and this gives us the ultimate results.

We can find a close link between economic structure and the Technical Education and Vocational Training Index results. We in the Arab region are facing significant divergence in technical education and vocational training systems, where some countries are still suffering from the absence of the basic conditions of technical education and vocational training.

We have divided the Arab countries into three groups. The first group includes the United Arab Emirates, Lebanon, Bahrain and Qatar.





We note that there is a balance in these countries between supply and demand. The second group, such as Morocco, Tunisia and Jordan - promising but not oil-dependent economies - have numbers of students but do not have the resources to provide what the technical education and vocational training need. The third group includes Egypt, Saudi Arabia, Algeria and Yemen. For Saudi Arabia, Algeria and Egypt, there is a problem of a large number of students, which is a demographic problem.

If we compare the Human Capital Index and Technical Vocational Education and Training Index, we will find that there is a correlation between the two indicators,

but what does this correlation mean? It means: Whenever the technical education and vocational training system puts man as a key goal of its strategy, it is more closely related to the International Capital Index.



#### **Moderator:**

We will move to Dr. Zubair Shahid who will talk about economic challenges of technical education and vocational training, from his experience.





**Dr. Zubair Shahid:**

Technical education and vocational training are not only a priority to address unemployment and to promote young people to enter the labor market in developing countries, but also in developed countries, especially in Economic Cooperation Area.

I cannot talk about all challenges facing technical education and vocational training, so I will address only four key challenges: first, expanding in education,

training and teacher training facilities. Second, the equality dimension in terms of sex, which is a key component in this dimension. If we look at labor force, we will find that the number of working women is still lower than the global average. Therefore, this is a major area to work on. With regard to excellence, we are facing a problem in getting the required quality, where more educational institutions and schools can be built, but the procedural dimension of education must be integrated with the physical dimension, i.e. learning. Excellence and quality assurance ensure that the standards of learning meet the requirements of the industry and the labor market, which also leads to high employability.

**One of the attendees:**

I have a question to Zubair Shahid, do UNESCO and UNEVOC have a plan to help us?



**Dr. Zubair Shahid:**

One of the main things that UNESCO and UNEVOC do - in addition to knowledge development activities - is to provide assistance to many of decision-making institutions all over the world, starting from policies and decision-making down to the level of implementation. This is what 186 countries do through 250 centers.



**Moderator:**

The floor is yours, Dr. Youssef, but briefly.

**UNEVOC, UNESCO and the United Nations are only stimulators; however, governments develop their national strategy.**



**Dr. Youssef Sadik:**

I just want to explain that UNEVOC, UNESCO and the United Nations are only stimulators; however, governments develop their national strategy and go in line with the prospects offered by the UNESCO.

**One of the attendees:**

In the Arab world, we are facing problems related to the development and sustainability of education and lack of diversity of education systems, what is your opinion about that?



**Dr. Youssef Sadik:**

Sure, we are facing a problem in the sustainability of learning, and for the first time, we took into account in the Index, continuous training, because if we give students specific skills, we will find that economy is changing. Therefore, we have to support companies and employers to be engaged in the overall strategy of technical education and set a perception for it.







Day 2

# Knowledge Factory

## Session 2

# Knowledge Economy Information and Communication Technology

### Topics

- Structural unemployment is a challenge to Arab economy.
- The Fourth Industrial Revolution as a knowledge-based technological economy.
- Competitive prospects in the knowledge economy.
- Economic impacts of the digital divide.

الدكتور خالد الوزني  
مدير الجلسة  
Dr. Khalid Al-Wazani  
Moderator







## Speakers

### **Dr. Luis Serven**

Senior Advisor in the World Bank's Research Department

### **Dr. Cosmas Zavazava**

Chief of Department, Projects and Knowledge  
Management & Administrator for ICT Development  
Fund (ICT-DF), ITU

### **Professor Yousry El-Gamal**

Former Minister of Education, Egypt and Chairman of  
the Board of Trustees at the Egypt-Japan University of  
Science and Technology

## Moderator

### **Dr. Khalid Al-Wazani**

Economist and Strategy & Knowledge Advisor at MBRF





**Dr. Luis Serven**

**Senior advisor in the World Bank's Research Department**

Dr. Serven worked as a senior researcher at the Foundation for Applied Economics Studies (FEDEA), and taught at the Complutense University of Madrid, the Massachusetts Institute of Technology (MIT), the Pontifical Catholic University of Rio de Janeiro PUC-Rio de Janeiro, and the Centre for Monetary and Financial Studies CEMFI in Spain.



**Dr. Cosmas Zavazava**

**Chief of Department, Projects and Knowledge Management & Administrator for ICT Development Fund (ICT-DF), ITU**

He holds a PhD in multilateral trade (Switzerland), Master of Laws (United Kingdom), Master in International Relations (USA), Master in Business Administration (Zimbabwe), Bachelor's Degree in Business Administration (USA), and Diplomas in Telecommunications and Systems Engineering.



**Professor Yousry El-Gamal**

**Former Minister of Education, Egypt and Chairman of the Board of Trustees at Egypt-Japan University of science and Technology**

A Professor of Computer Engineering, and a Senior Consultant at The Arab Academy for Science and Technology, and Chairman of The Computer Scientific Society. He joined the Nuclear Reactors Department at the Atomic Energy Commission, and received a diploma in nuclear electronics from the International Atomic Energy Agency.





**Moderator:**

When we look at the global Knowledge Index, we will find that the United Arab Emirates has leapfrogged six stages, and the secret lied in the ICT sector.

Do you agree that this sector represents an essential engine for those who want to develop their economy, if the infrastructure of this sector is appropriate?



**Professor Yousry El-Gamal:**

If we look at the development of the industrial revolutions, while we are talking today about the Fourth Industrial Revolution, we will find it linked to achieving a better life for human beings. Moreover, we coexist with its components starting from mobile phones and applications that are increasing significantly on a daily basis.

The Internet of Things and the connection to the network is not only for humans, but everything begins to be involved in this connection. All the needed

resources are available on cloud computing and GPS that we all use. In addition, the user interface became very easy whether it is by voice or touch.

The sensors started to be smart sensors that exist in all of these fields; Big Data and dealing with it, and then there is the augmented reality, which is mixing between computer programs and reality. All these things have created a new world that is the cradle of the Fourth Industrial Revolution. Furthermore, a new network will cover the whole world, where you will become continuously connected all the time through the Starlink network to achieve low-cost communication. However, the base was to provide an opportunity to connect to the internet in any field, at a very high speed. The SSC has begun to grant approval for the establishment of this network. In addition, the number of satellites is unbelievable. There are 1459 satellites in use today and we fell the usage range in many devices, equipment and robots that help humans. Therefore, we might find that all factories will be transformed into smart factories, by using technologies of artificial intelligence.

A deep artificial intelligence team at Google created protection algorithms that have never happened before, which have been more effective. In 2017, Putin said: «whoever leads in AI will rule the world!», and this thing reflects the importance of the new artificial intelligence. Of course, China has several plans to



excel in this field. The bigger artificial intelligence is, the more investments it attracts in the search field. Therefore, its force becomes bigger.

Holograms and their uses in the creation of 3D shapes interact in both entertainment and education with real shapes that exist significantly and interact with humans.

In addition, the new concept is the quantum computing. Furthermore, there are universities that teach quantum computing. Moreover, many startups began to study and work in quantum computing.



#### **Moderator:**

What is the impact of artificial intelligence on the economic structure of countries, as well as on the human resources we have in this part of the world?







**Dr. Luis Servén:**

All this rapid technological change has important implications for the economy. Policymakers around the world are turning their attention to the ever-changing technological changes that cause the destruction and collapse of a number of professions, which is the main concern of today's policy-making community.

Moreover, it is an integral part of automation, and robotics usage instead of human resources. Today, we notice that automation is evolving and will progress rapidly in the future. I refer not only to tasks that rely primarily on skills. Furthermore, the tasks that

- we thought - could not be automated have become automated, such as the mid-level tasks including court clerks or radiologists. Moreover, robots can perform this more effectively. Technology eliminates some of our jobs but it creates new ones.

If we believe that in the Middle East, we need to make balance between human resources and technology to adapt to new circumstances. However, the balance does not occur this way. I will refer briefly to a new report issued by the Office of the Chief Economist in the region, the World Bank, entitled «New Economy for the Middle East. » We can see from the skills' aspect that in recent years of schooling, there has been a steadily increased interest in skills in the region over the past decades. Furthermore, we can see these indicators that show the number of education years completed by the population.

However, what did we get from those facts? What we got was information about people who suffer from unemployment. Unlike the developed countries, therefore I will present unemployment rates in a number of countries regarding the stages of basic, intermediate and higher education.

The world needs a new social contract that enables youth to consolidate the foundations of a new economy based on digital innovation and services economy, and encourages innovation within the dynamics of the private sector.

Therefore, as part of education, we need a comprehensive renovation in some countries of the Middle East to take advantage of new technologies. Nobel Prize winners in economy speak of the need for an education community that fosters innovation, the spirit of cooperation and risk-taking. However, schools in many of our countries are moving towards the old system of employment in the public sector, and directing graduates to work in government sectors.

In addition, the content of curricula has to be appropriate. It should focus on technology, science, engineering and mathematics, which are the basics of new technologies, if we wanted to take advantage of them.

We need a broad interface of reform that begins with the role of the state. The state enables us to lead the entire development process, and we need to modernize



financial systems by demanding improvements to keep up with the new digital age.



#### Moderator:

Dr. Cosmas Zavazava: Is economic development in itself about human resources, which we have to take into consideration and take care of? If we look at the digital economy, should we look at both sides; the ICT sector, as well as the human resources development sector, in the light of the fourth industrial revolution?



#### Dr. Cosmas Zavazava:

Today, we are talking about the objectives of the sustainable development by 2030. I think meaningful technology has to affect people's lives. Some countries are classified as developing countries that do not have access to submarine cables. Therefore, they cannot make any change, since they face the challenges of communication, bandwidth and cost. In addition, there are small island developing countries;



38 of them spread all over the world, which face geographic challenges, especially that we are in an age of challenges due to climate change. Over the past three years, each year scored a record over the previous year; they have recorded the highest temperatures in the world.

Natural disasters represent huge challenges, especially for the least developed countries. Furthermore, we know that 90% of all natural disasters are related to climate change, and this is also a major challenge, yet we can all change this using ICTs, and especially for small island developing countries, where land is shrinking. Some of those islands are expected to disappear within five years due to instability. However, we can use technology in some tasks to explore further environmental changes. Environmental degradation is the key element because it is the third pillar of sustainable development.

In terms of addressing economic challenges and layoffs, as well as economic development in general, we can use technology, especially when we go to dangerous areas of natural disasters. However, in other di-

**We cannot continue doing things the same way we did yesterday, with the problems of yesterday and expect any difference.**



sasters, of course, we use artificial intelligence, hence the entry of robots begins.

Big data, Internet of things, AI, and robotics ...etc. are important in understanding the changing factors, and then in the future.

In addition, there is another important thing, innovation. We cannot continue doing things the same way we did yesterday, with the problems of yesterday and expect any difference.





## Attendees' Questions

### One of the attendees:

There is unemployment and humans will almost have no value, so what is the alternative? How will future education be? What kind of education should people study so that they can find future jobs?

### One of the attendees:

Robots and mechanization will perform agriculture and work in factories; does this mean that we stop childbearing?

### One of the attendees:

- What are the implications of the development in the ICT, technology and other sectors?
- The knowledge economy has changed the elements of production, what is its relative value now? What is its effect on economic growth in general?
- How is innovation linked to education and scientific research?

### One of the attendees:

- How can we bridge the gap between the academic community and what happens in workplaces?
- How can we solve the issue of mistrust between governments and the private sector in the area of information?

### One of the attendees:

What does technology work? Why cannot we meet its challenges to this level?

### One of the attendees:

Where is the humanity of humans? Where is his heart? Is there any ideas about what can associate technology in regard to humanity in order not to turn a human into a robot?



### Dr. Luis Servén:

- Some skills will become obsolete because of automation. However, we have to think about the first industrial revolution that made us imagine that drivers of horse carts were doing business, and we no longer see them, yet that did not cause unemployment. Therefore, the base is that we need to train people in jobs that will not disappear, knowing that these jobs require a high level of thinking, including the ability to adapt to changing circumstances and situations, making it very difficult to automate. It is difficult to determine exactly the hard job of these jobs, but we can give





people a set of tools and mechanisms as well as education opportunities that will allow them to adapt to a changing workplace.

- Of course, this will not solve everything, because some people are getting older and cannot learn or practice again. In addition, the social protection has no effective role to play in making some employees in such jobs become able to perform functions created by the new economy. Therefore,

society has to provide some form of support for the transition process.

- The social capital is facing a fundamental problem that is difficult to be measured. However, we know that it has a key role to play in gaining trust, facilitating contracting procedures and performing economic activities. This can show that the social capital can play important roles in terms of politics and so on.



- Finally, technology is not about enhancing skills of individuals; however, we need to find a way to utilize its strengths in enhancing capabilities and skills. I think education should start early, as we know that early education for children is critical to the development of future individuals to look better.



#### **Dr. Cosmas Zavazava:**

- Innovation can be in the form of technology in terms of performing operations, tasks, and so forth.
- Regarding the issue of trust between businessmen and government, I believe that behind any major commercial business or a project there is a citizen, and the citizen must comply with public policy. Therefore, officials ask the government to engage the business sector in the formulation of public policies. In addition, such consultations are important to establish the sound basis of public policy, and work within a legal framework and a predictable, non-discretionary regulatory framework.

- We have to consider the issue of ethics and behaviors when we introduce new techniques, such as artificial intelligence.



#### **Professor Yousry El-Gamal:**

- The ICT index was divided into two sectors: a sector related to infrastructure and another sector to uses, and technology is a fact that affects both sectors. The indicator shall be successively modified to adapt to all the developments in the field of Information and Communication Technology.
- Regarding the academic community and the labor market, the truth is that there is a very important report issued in the UAE about future jobs in 2040. All universities of the world are fully engaged in preparing themselves to meet the needs of the future, not only because technology is changing, but also because the generation that is studying nowadays is not the previous generation but a completely different one. Universities should meet the requirements of the generation and market requirements, which is a key task at universities to pursue new jobs and job needs in the future.







## Day 2

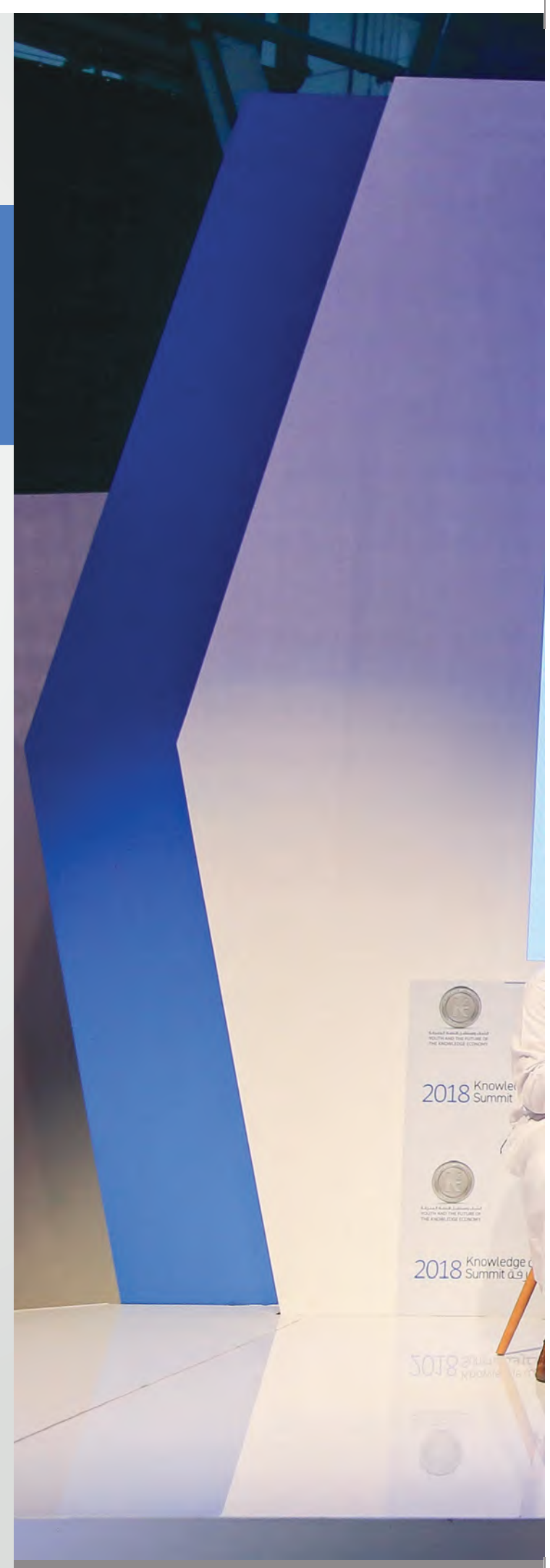
# Knowledge Factory

### Session 3

## The economic return of higher education, research, development and innovation

### Topics

- The efficiency of the higher education system.
- The reciprocal relationship between higher education and the labor market.
- Differential performance of research and innovation around the world.
- The effect of research, development, and innovation in the economy of knowledge.











## Speakers

### **Dr. Ali Ibrahim**

Associate Professor, United Arab Emirates University

### **Dr. Thomas Parker**

Senior Associate (Emeritus)

### **Professor Motaz Khorshid**

The Former Minister of Higher Education and Minister of State for scientific research, Egypt

### **Professor Hugo Hollanders**

Researcher, Innovation Research and Policy Programme Coordinator at Maastricht University

## Moderator

### **Dr. Ali S. Al-Kaabi**

Secretary General of UAEU





**Dr. Ali Ibrahim**

**Assistant Professor, United Arab Emirates University**

A core team member for the Arab Reading Index 2016, co-directed the Institute for International Studies in Education, University of Pittsburgh for one year and was involved in development projects in a number of countries. He managed research projects at Carnegie Mellon University, and taught in the colleges of education in Egypt and Oman.



**Dr. Thomas Parker**

**Senior Associate (Emeritus)**

A widely respected expert on higher education and non-profit management. Holds a Doctorate in education degrees, and is a senior associate at the Institute for Higher Education Policy (IHEP), Thomas was a co-founder, senior vice president, treasurer as well as the president of the Education Resources Institute.



**Professor Motaz Khorshid**

**The Former Minister of Higher Education and Minister of State for scientific research, Egypt**

He was Vice-President of Cairo University for Graduate Studies and Research and Vice-President of the British University in Egypt, Chief Technical Advisor for Socioeconomic Development Planning Support Systems in the United Nations, Senior Research Scientist in Kuwait Institute for Scientific Research (KISR), and Dean and Vice Dean of the Faculty of Computers and Information at Cairo University.





### **Professor Hugo Hollander**

**Researcher, Innovation Research and  
Policy Programme Coordinator at  
Maastricht University**

An economist, he worked as a researcher at Statistics Netherlands (National Accounts division), and has been involved in various projects for the European Commission on measuring innovation at the national, regional and industry levels. He also has been one of the principal researchers involved in redesigning the European survey on business innovation.











**Dr. Ali Ibrahim:**

The higher education index consists of two pillars: the inputs and the outputs of higher education, and according to the results of the index of higher education worldwide, the average is 39.02. We have 63 countries higher and 68 countries less than average. The lowest percentages were for Arab countries, sub-Saharan Africa and South Asia, unfortunately!

When we noticed some decline in inputs and outputs, we started to think about some problems in higher education and we came up with three problems: The problem of efficiency, the problem of enabling environment for higher education and the problem of the interdependence between higher education on the one hand, and research, development and economy on the other. There are some observations that must be taken into account: first, Efficiency of education is characterized by many complexities. Second, it is difficult to measure efficiency in higher education due to external factors. Third, the method of measuring the effectiveness of higher education assumes that student performance or graduation rates are equal in each educational system in each country, which is not true.

The last observation is: Current researches indicate

that higher education institutions show different indicators of inefficiency. In addition, the decline in higher education output may occur in the developed countries more than in some developing countries. Therefore, we should not judge in advance and say, for example, that the system in Morocco is inefficient because the education system generally is inefficient! We found out that some countries may be developing and yet they can benefit from the inputs more than developed countries. Now, how can we estimate efficiency? We can calculate the percentage by dividing outputs on inputs, if the result equals one that means a good start for efficiency, and if the result is less than one, the system is not efficient, but if the result is greater than one, the system is efficient because outputs are more and better than inputs.



**Moderator:**

Dr. Thomas Parker, be my guest.

**We should not judge in advance  
and say, for example, that the  
system in Morocco is inefficient  
because the education system  
generally is inefficient!**

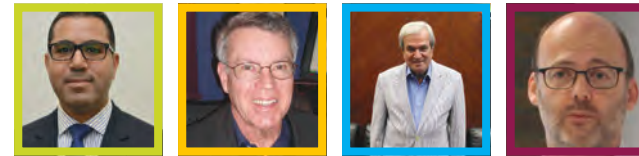


**Dr. Thomas Parker:**

I would like to talk about the type of education that communities need. It is assumed that if we know the type of higher education that societies need, we can create colleges and universities to meet these needs. This may or may not be true. It is also assumed that there is an authority to tell us what type of institutions communities need, and I would suggest two sources of this power: the first, a central authority like the Ministry of Higher Education or a branch of government, and second, assess the community needs from universities themselves. The problem is how do we estimate efficiency? Regardless of how we find out what the community needs, what the university should do, and how we assess whether universities actually achieve this commitment or not, the world today is obsessed with global classification; people believe in rankings!

I belong to a group called the International Classification Experts Group. So, in theory, I'm an expert on global classifications, but let me assure you that the more you know about global classifications, the more suspicious you become of results.

There are some efforts exerted by global classifica-



tion experts to solve this problem, but global rankings are more important in the minds of the public, politicians and most of the society, so we have to fix this. However, by assuming that we have corrected all these and obtained more rational rankings, we still need to evaluate evaluators, categorize the evaluators, look deeply into the evaluators, examine the criteria they use, the statistical methodologies, and the values of systems that they embrace openly and privately.



**Moderator:**

Now, with the third speaker, Professor Motaz Khorshid.



**Professor Motaz Khorshid:**

Innovation in production must come through research and development centers, whether in companies or in productive institutions. Even the community-based innovation needs a knowledge factor or a person capable of R & D. The countries that have succeeded in innovation in general have a strong base for research,





development and innovation. We saw that this is the first systematic choice we chose. In the second methodological choice, we dealt with three main aspects of innovation: innovation within the system of scientific research and development, innovation in production through the production system - Technological and non-technological innovation - and then community-based innovation that focuses on intangible assets, creative outputs and different cultural outcomes. Innovation and scientific research contribute greatly to achieving - or approaching - the economy and the society of knowledge and achieving sustainable development. The best results at the level of scientific research and innovation, both productive and commu-

nity-based, have been occupied by the OECD countries on the top 10 levels worldwide.

The Arab countries are below the global average at all levels! The average performance of Arab countries is 21%, less than the global average of 27%. Arab countries are the least spending on R & D, complaining about the shortage of researchers and the lack of patents.

As for the economic return, there are two basic methods: statistical analysis, and building composite indicators, we have chosen the first method. There are now more focused indicators on the economic return process, such as the International Innovation Index, the Innovation Output book of the Organization for



Economic Cooperation and Development, and the Knowledge Triangle Guide. All of these are Indicators focusing primarily on economic returns, and there are other methods that are used later. We chose a set of indicators such as patents for every million people because patents are the first step to innovation, and Arab countries are the least performing in this regard.



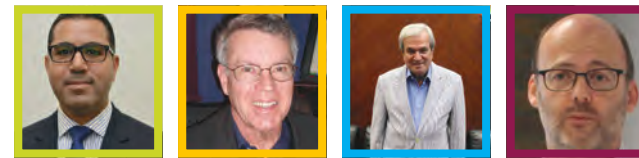
**Moderator:**

Now, we move to the scientific research index, but with another experience and a different perspective, with Professor Hugo Hollander.



**Professor Hugo Hollander:**

My main interest is innovation. In many countries around the world, statistics are collected on innovation by sending questionnaires to companies, so you ask companies about their creative activities, how they innovate, what kind of obstacles they face, their goals, why they innovate, and what the effects of innovation are. Responses to the innovation questionnaire in



2006 for 21 European countries stated that 30% of companies believe that the impact of the innovation process is very important.

The second source is the Global Innovation Indicator of the Year. A survey was conducted with approximately 2,100 innovative business managers who said that 40% of innovation had a positive impact on the company. There is also a global innovation index that showed the results of the innovation efficiency ratio, through 7 pillars, 5 sets in the sub-index of innovation inputs, two sets in the innovation output index, and divided the output index through the input index, and then ranked the countries from the most creative and efficient to the least efficient.

I would also like to mention that I am a key author of the European Innovation Panel for results, where we also have classification training in Europe. Since we strongly got criticized earlier this year and were blamed that we were sending wrong signals to policymakers, we organized a workshop for experts three weeks ago in Brussels for academics and non-academic purposes. We discussed many issues related to the framework of our measurement, including the ability to measure efficiency, and the general consensus was that one has to be very careful, because it is very difficult to determine what the outputs and patterns are. So the JRC reached the idea of using data analysis packaging, this concept means that you have different





weights for each country, and taking into account that your national research and innovation system may be different from its counterpart in other countries.

How can we measure efficiency? I would say do not do that, use simple input and output ratios, otherwise you get some very strange results. For example, in the European Case, Sweden is the most innovative country in our classification, but Romania is the most efficient country! So, we have to be careful with the input and output ratios, and use the R & D Index with the «dimension to efficiency» analysis.

#### **Attendees' Questions**

##### **One of the attendees:**

What are your thoughts about «world ranking» of universities?

##### **One of the attendees:**

What are the data and the way you obtained the statistical data?



#### Dr. Thomas Parker:

The basic issue of world-class universities started because of the global rankings. Everyone around the world in the past 20 years has been the fastest to enter a world-class university, resulting in poor distribution of wealth.

I mean, if we run our hospitals the same way we run our education, we will find the sickest people treated in hospitals with the least potentials, while the least sick people will be treated in hospitals that have the



highest potentials! This is wrong distribution; world-class universities are very expensive, and it is not very clear what the return on society is. As this money can be used in something else that is useful.



#### Dr. Ali Ibrahim:

As for your question: where do we get our statistical data, we have taken it from the UNESCO and the World Bank.



#### Professor Motaz Khorshid:

The issue of global classification is a very important issue. Universities that focus on education and community service have fewer opportunities to be ranked high, so we have to be careful.

**In many countries around the world, statistics are collected on innovation by sending questionnaires to companies.**







## Day 2

# Knowledge Factory

### Session 4

## Information and Data: A Cornerstone in Building Knowledge Economy

### Topics

- **What cannot be measured cannot be managed:  
Data is the Solution.**
- **Data Science in the Service of Humanity.**
- **What Can Governments Learn from Open Data  
Revolution?**
- **Organizing data protection: Privacy as an  
opportunity.**
- **Data as a Commodity: How companies profit  
from selling your personal data?**









## Speakers

**Mr. Younus Al Nasser**

CEO of Dubai Data Establishment

**Mr. Pedro Luis do Nascimento Silva**

Former President of International Statistical Institute

**Dr. Ali Hadi**

University Professor and Chair of the Department of  
Mathematics and Actuarial Science

## Moderator

**Dr. Mohamed Ali Ismail**

Chairman of the Statistics Department at the Faculty of  
Economics and Political Science at Cairo University





**Mr. Younus Al Nasser**

**CEO of Dubai Data Establishment**

He holds a Bachelor of Business Information Technology from HCT in 2014, and member of the Dubai Open Data Committee. Al Nasser was a Director of Projects and Security Systems in Dubai Electronic Security Center.



**Mr. Pedro Luis do Nascimento Silva**

**Former President of International Statistical Institute**

Pedro has served as a principal researcher at the National School of Statistical Sciences in Brazil. He holds a Bachelor degree in Statistics (1980) from the same school. Mr. Silva obtained a master in Applied Mathematics from the National Institute of Pure and Applied Mathematics Association (1988), and a PhD in Statistics from the University of Southampton (1996).



**Dr. Ali Hadi**

**University Professor and Chair of the Department of Mathematics and Actuarial Science**

He is a Professor Emeritus at Cornell University. Dr. Ali is a founder of the Actuarial Science Program, and former Vice Provost and Director of Graduate Studies and Research at the American University in Cairo (AUC). He served as a Professor of Statistics at Cornell University. Dr. Hadi served as an Assistant, an Associate, and a Full Professor, as well as the Chair of the Department of Social Statistics at Cornell University's School of Industrial and Labor Relations.



2018 Knowledge Summit  
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**Moderator:**

What is the importance of data? How can we use it in building a knowledge society?



**Mr. Pedro Silva:**

We need data to measure and develop knowledge. Data is the product of measurement. We live in close proximity to unprecedented volume, availability, and more importantly access to data. Data is more accessible today than ever.

Data is needed for the management of countries, of societies to try to improve themselves in the next period. Data is not only important for the public sector, or management or governance of countries. In the private sector, the search for the competitive advantage demands more data, knowledge and information extracted from data, so that you can derive a value for your business.

It has come to the point that even crimes have recog-

nized the value of data. Today, we are facing the issue of privacy and the means of protecting privacy in this vast world of vast and rich data.

There are glaring data gaps in many parts of the world. For example, in low-income countries, more than 70% of births are not registered. This means that new individuals who are born lack basic citizenship. So, besides these gaps, there are also quality issues. We are talking here about the issue of achieving and measuring towards the sustainable development goals. In most countries of the world, we do not have statistical systems ready to provide data for calculating all those indicators. There are also issues concerning the quality of some of the data we already have.

- We have a lot of data and we have data gaps. Therefore, we will need some way of going about resolving these two issues. The fact that we have access to big data or data in high volumes does not necessarily mean that we have a good or better data about some issues. Many of the data sources, which we have access to through these approaches and new methods, lack the quality required for their safe use in many applications. Therefore, quality challenges can be even bigger with big data. In addition, there are issues like veracity, or volatility of this source, and some issues related to the complexity of data. This is in addition to the issues of coverage, coverage by us. We can miss some issues due to the loss of data, incorrect mea-



surement or specification error.

In the coming years, there will be many data and information about the world better than we know, and many of what we already know about the world will rely on statistics and their interpretation. This means that, in the big data era, we will require more, not less, statistical thinking. One must be statistically literate to have a critical understanding of statistical information.



#### Moderator:

What is the role of data science in the service of humanity?



#### Dr. Ali Hadi:

Not only collecting data is important, but also collecting high-quality data is more important, because the decision that you will make from data cannot exceed the quality of your decisions and cannot exceed the quality of your data. Therefore, data quality is of utmost importance in analysis and in decision-making. Then, the question is: how do you extract knowledge from high-quality data? We have to learn how to use this. Statisticians know that statistics has failed to modernize itself, in a timely fashion, to deal with the huge amount of information that you receive today. It also has failed to cope with the new real-world troubles, which we are facing today. For example, decision-making has no relation to the contribution to a number of fields like networks, which are mainly







statistics but the number of the control issuance people in computer science far exceeds that of statisticians. So, the failure of statistics to meet the current demands has given rise to the introduction of new fashionable terminologies, such as: machine learning, data mining, data analysis, big data, and most recently the term of data science. Data science is the medium by which we can extract knowledge from data. It is simply defined

as the general extraction of knowledge from data to facilitate evidence-based decision-making.

So, we have data and from data we extract knowledge, it is a multi-disciplinary area that benefited from many other areas in academia. However, knowledge by itself even that extracted from data, will become useless if you do not use it to make a good decision.

Now, most of us will believe that more knowledge is

better. Generally speaking, yes, but this assumes that we actually use knowledge for the benefit of humanity. For the application domain, you need to use the tools that use data science to solve real-world problems. Data science is really done in the teamwork; the teamwork is not a simple single individual who will realize all data. Teamwork comes from different fields of specialties. Therefore, their science will reap its real fruit, when different teams cooperate and share their work with other teams.

Given that data science is a multi-disciplinary program in data science, it is very important for it to slide the balance between these different disciplines. Working with data requires a variety of skills and concepts including many traditional associates in the fields of probability, statistics, mathematics, and computer science. If you want to design a programing data science, you need to balance all these skills.

To be a data scientist, you should have a great number of integrated skills represented in mathematics, statistics, machine learning and data science, as well as a good understanding of real-world problems.

A data scientist needs to know how to use mother computer languages and some packages such as «R» and «Python». A data scientist also needs to be able to deal with problems related to current and future types and sizes of data, and solve relevant problems.



#### **Moderator:**

Tell us about Dubai's experience in how governments benefit from data.



#### **Mr. Younus Al Nasser:**

Data is not something new. Data has existed for thousands of years. However, it becomes (digital) today. Over thousands of years, knowledge has been transmitted by the intellect. Minds used to deliver and transmit information from one person to another. However, the amount of information is increasing. The difference is that, today, we are talking about information and data, which we will produce every moment. I'm talking about where we stand today in smart Dubai, and the aspirations of the UAE and Dubai ambition in terms of data. His Highness Sheikh Mohammed Bin Rashid Al Maktoum -may Allah protect him- launched the first law on the dissemination and exchange of data worldwide. It considers data a key to







any transformation process for the emirate of Dubai, supporting important strategies in the emirate, as well as processing the existing data in our institutions and departments.

As we are talking about data, we should have an integrated system. First, I want to talk about how to build an integrated system and how it works. Yes, I know the importance of data, and we understand

data science. Nevertheless, when we employ it in an integrated environment, such environment requires legislation and systems that absorb this amount of information, as well as it needs modern technologies such as artificial intelligence, information analysis techniques to benefit from a large amount of information we have. We also need great cooperation between all institutions. I am not saying that we need





to change statistics completely today, but we need to work out an updated picture of how to deal with the coming challenges in the future. Today, we need to create new knowledge, and this knowledge needs future tools. Today, we are talking about how humans can deal with the machine in saving such a large amount of information, extracting knowledge that can help us measure our competitiveness and improve our services in the country. Additionally, the most important factor that exists for us today is people's happiness. How can we use this information in making people happy? We need an integrated environmental data system.

The second factor I am talking about is the data economy. We often hear that we have moved away from data. Today in this summit, we consider that we are talking with young people about knowledge economy. Data is an economy that exists around us. How can we extract this economy today? How do we deal with it? In the emirate of Dubai, we conducted a study on data economic impact in 2021. Our estimate of economic impact is equivalent to AED 10.4 billion annually by 2021 as data economy added as economic value to Dubai's economy. What does this mean? We need new ways to handle this data.

Third, we should have an appropriate legislative environment. Many initiatives focus on open data, or the challenges we face in terms of data privacy. Today, as

individuals, we have a huge amount of data that needs to be processed and organized. With legislation facilitating the exchange of data among all economies, we can extract knowledge from data, and achieve the great benefit of data science and use it in our institutions.

Today, in the emirate of Dubai, we have provided this data on an integrated platform that we call «the Emirate of Dubai's Backbone». The Backbone contains a wide range of open and common data, available today to leverage in our studies, our analysis processes, as well as providing them to all sectors, whether for statisticians or those who are interested in economic studies, or in benefiting from such data.

Statistics speak about the present because today has already ended. We look for the future. How can I benefit from the large amount of information I have? To explore points of knowledge that show me how I can be a competitive, strong country, having a strong economy based on this information, and can compete with all world nations.

### Attendees' Questions

#### One of the attendees:

First, we have a definition for data, information and knowledge. However, the shift to knowledge is another separate phase and the knowledge I have is either implicit knowledge and I try to



convert it into explicit knowledge or it is explicit knowledge in the form of reports or strategies. Second, I believe that data mining has a very important role in the core of data science process. Its role is to have access to large volumes of data and extract patterns, forms, associations, coalitions, etc. Therefore, in fact, all these things must be identified.



**Dr. Ali Hadi:**

Statistics and computer science are not alternatives and they are not competitors either, but they are complementary. So, I am calling here for people to break the walls of minors and specialties and connect with people from other specialties. We need to collaborate together and work towards an ultimate objective which has good data quality, good extracts from the knowledge that exists in data for decision-making. Now, we may have different terminologies, but to me, the words «information» and «knowledge» are synonyms. Well, I say that information is data and I could be wrong.

**One of the attendees:**

Is there a strategy for the International Institute for Statistics to work with countries worldwide to define statistical concepts to unify the used terminologies?



**Mr. Pedro Silva:**

The United Nations Statistical Commission derives development factors from official statistics or public statistics. There are two ways to do so: setting standards and developing statistical capacity.

I am happy to report that there is an initiative at the same forum, called Global Innovation through Science and Technology (GIST), which conducts its statistical training. It is already operating, it is conducting an assessment of statistical capacity that it needs across the countries. Hopefully, in the coming years, it will develop, as it will help the United Nations Statistics Commission Develop Programs that could raise statistical capacity to face challenges.

**One of the attendees:**

What are the actions you have taken to prepare young people to be able to handle data?



#### Mr. Younus Al Nasser:

This is a very important area. Well, now there is a global challenge. Now, everyone is talking about the fact that we have a scarcity of current data scientists or specialties run by scientific universities.

However, just as we are accustomed in UAE and

the emirate of Dubai, we convert challenges into opportunities, as our leaders, may God protect them, taught us. We have launched many programs, the most important of which was the Master of Data Science and Analysis in collaboration with the University of Rochester Institute for Technology as the first Master degree in the region that handles and provides data science. Within one year, we will have graduates and we will celebrate the graduation of 30 data scientists who will feed our data systems in the next stages.







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